

# THE ARCHITECT & BUILDING NEWS

## IN THIS ISSUE

- PRIMARY SCHOOL, SANDFIELDS,  
PORT TALBOT
- MANCHESTER BUILDING EXHIBITION
- INFORMATION DIGEST

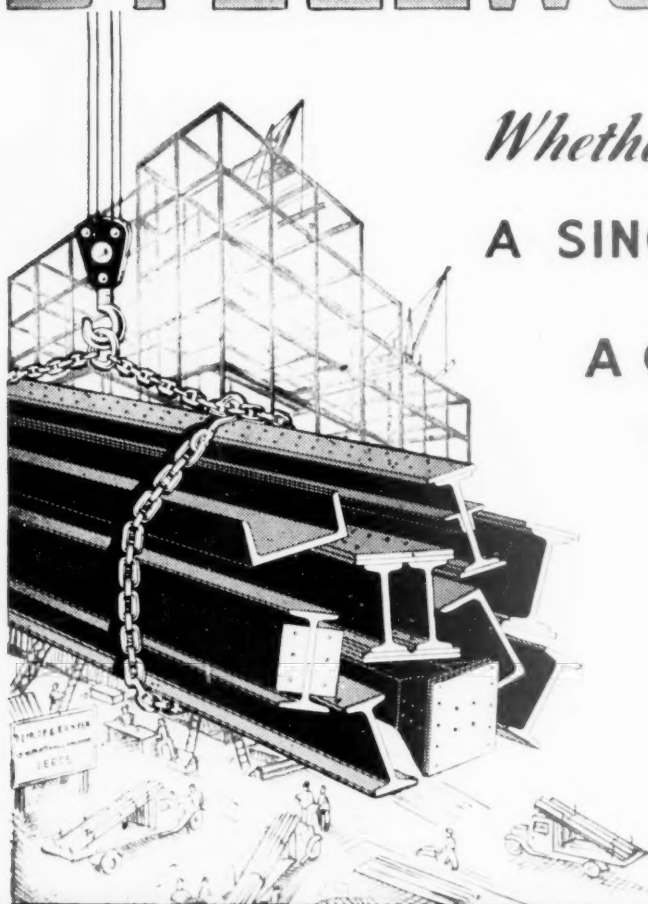
APRIL 10, 1952

VOL. 201

NO. 4347

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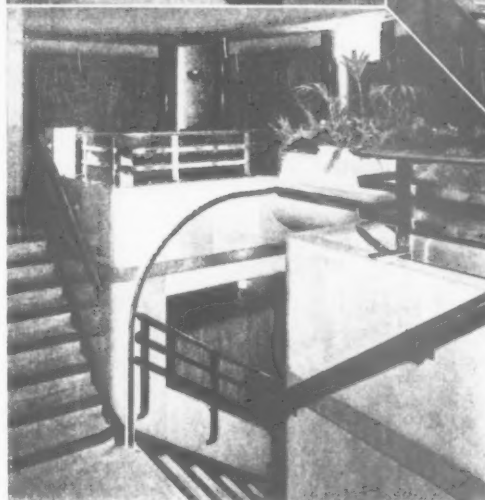
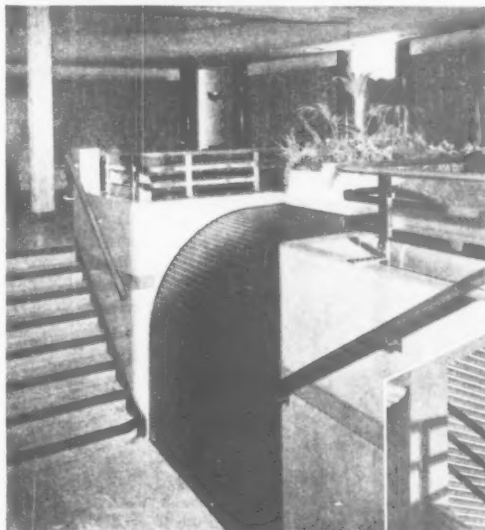
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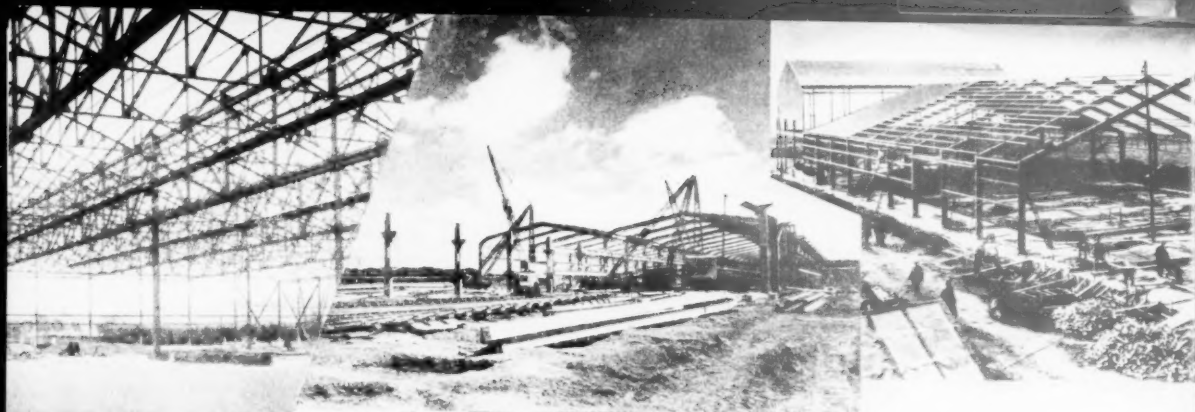
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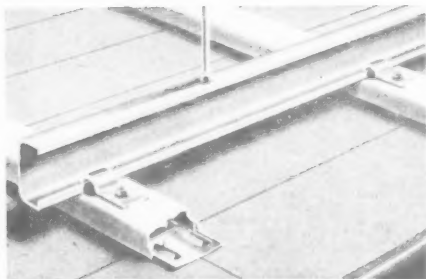
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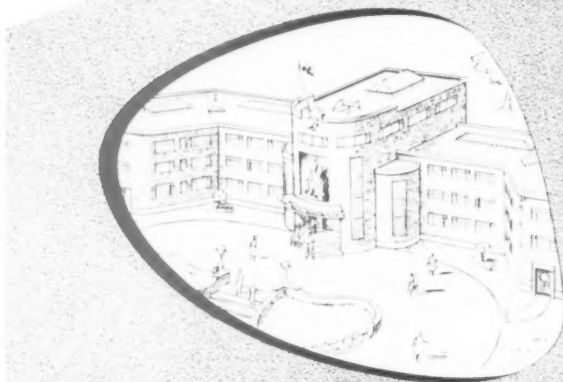
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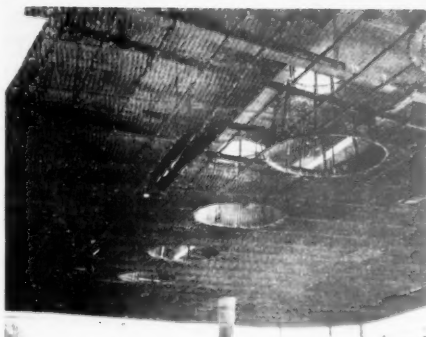
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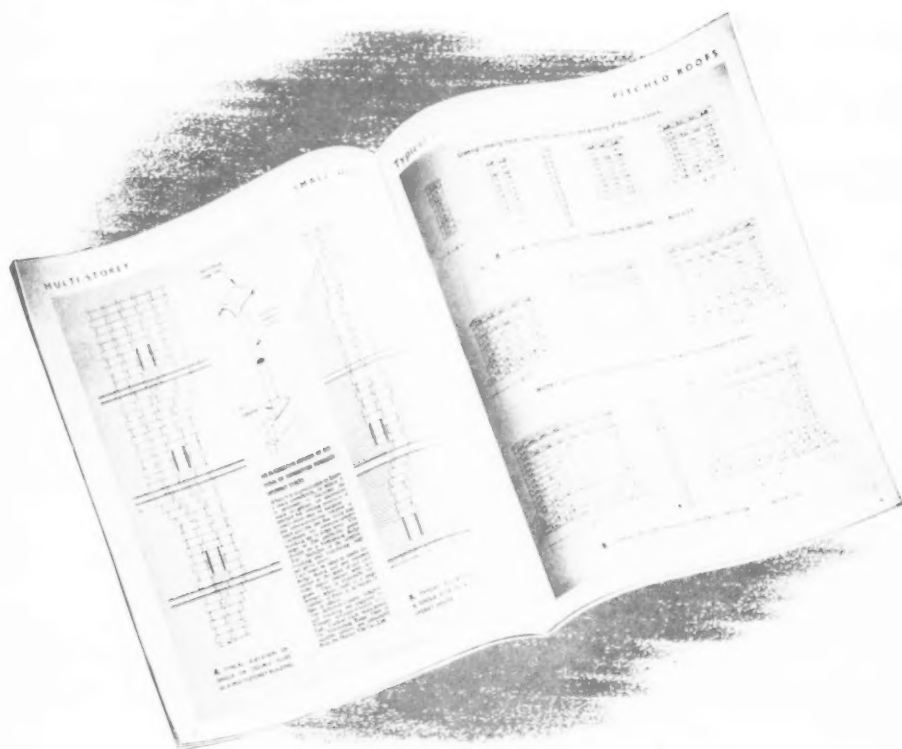
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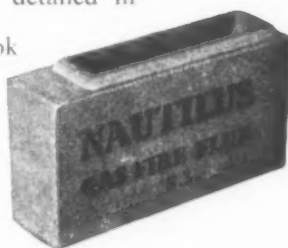
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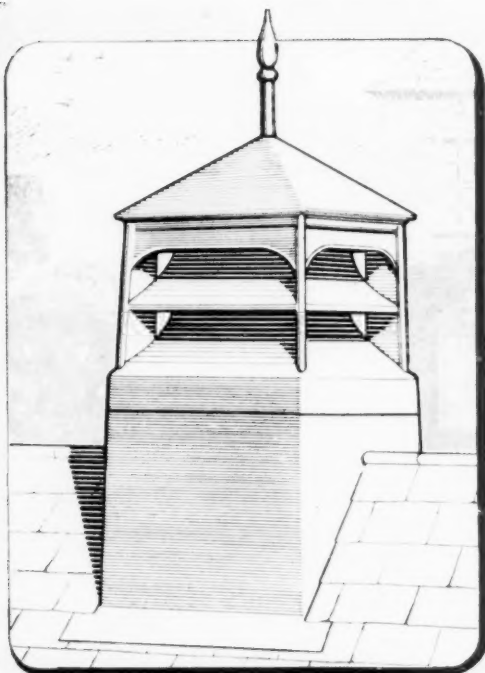


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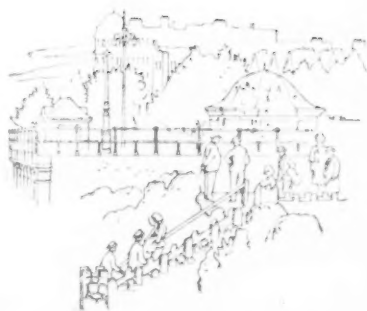
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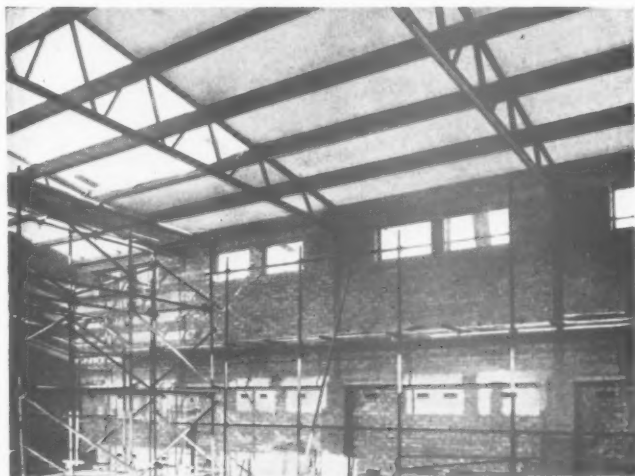


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Further technical details from :—

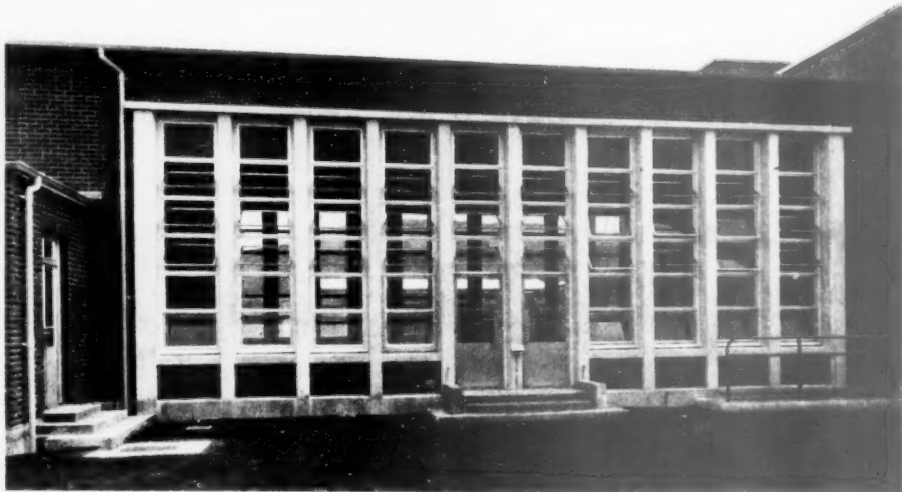
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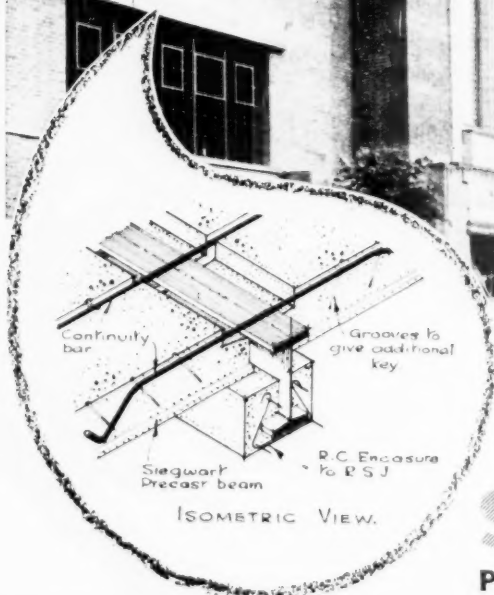
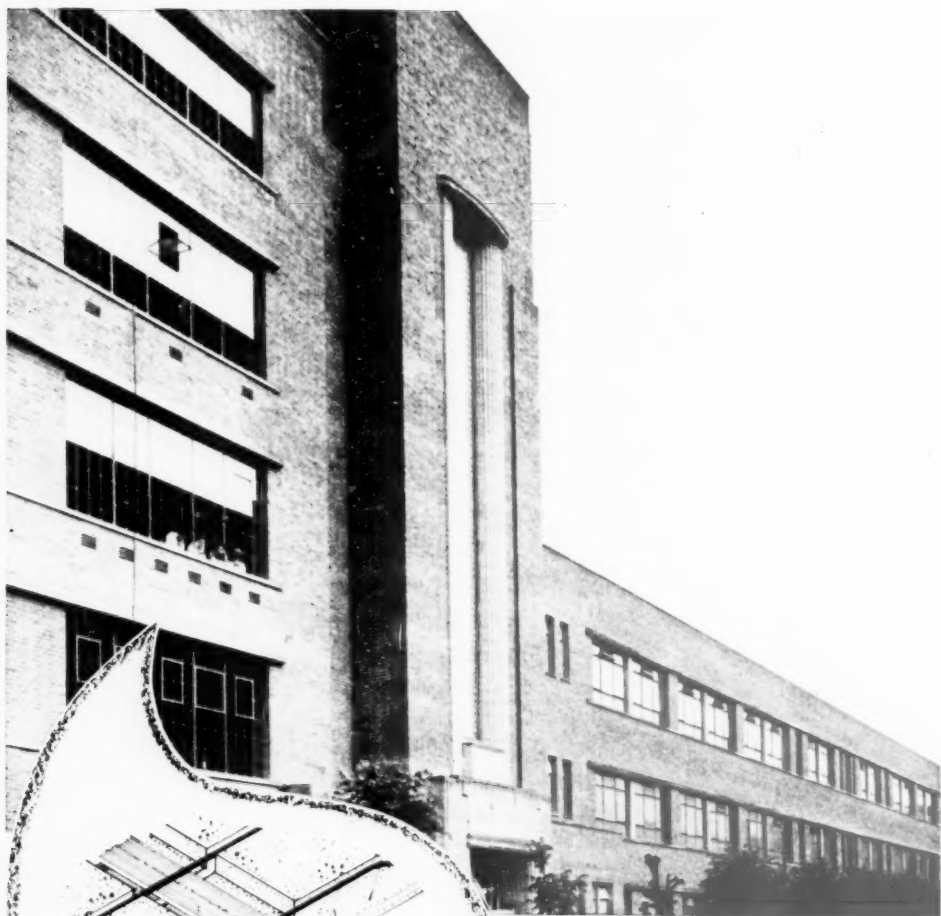
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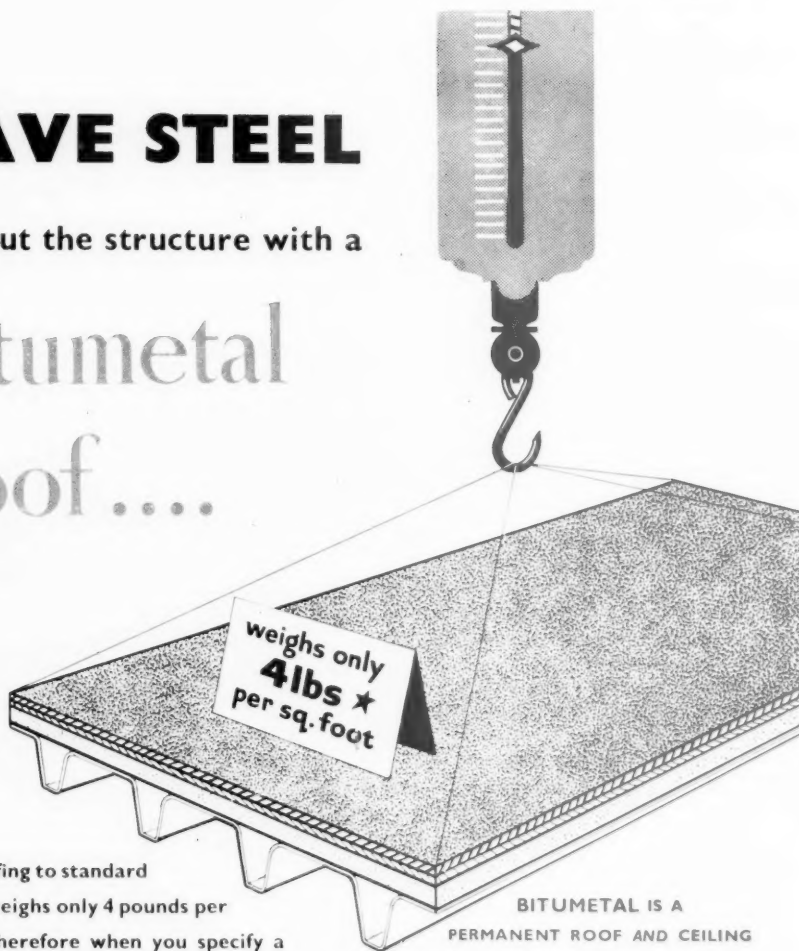




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THE  
**ARCHITECT**  
& BUILDING NEWS

April 10, 1952

The "Architect and Building News" incorporates the "Architect," founded in 1869, and the "Building News," founded in 1854. The annual subscription, inland and overseas, is £2 15s. 0d. post paid; U.S.A. and Canada \$9.00.

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## A M E N I T Y

AT the approach of the Easter break, most of us prepare to get away.

To get away from what? Well, for one thing the ugliness and noise that go with urban life and work. To the country, therefore, where there is beauty and less noise, or rather different noises, for it is pleasant to exchange the urban for rural sounds and fresh horizons for the jaded eye. It is at this time of year our interest in "amenity" revives and our resentment when we see it spoilt.

In his book "Development Plans Explained," Mr. B. J. Collins, County Planning Officer of Middlesex, said "Nobody can quite put their finger on Amenity. That is why it is used so constantly. In town and country planning it bobs up all over the place." Mr. Collins defines Amenity as "The quality which makes a desirable residence desirable, a favoured locality favoured, or enchanting views in all directions enchanting."

Others have expressed their dislike of the unfortunate word. Why it is disliked so much it would be hard to say.

Even that great man, Sir Ernest Gowers in his *A.B.C. of Plain Words*\*—which everyone should possess—admitted that he could find no English word to substitute for the American *Gobbledegook* and wrote "if my adoption of it does anything towards popularizing it over here, I shall have done my country some service."

Someone in the future is bound to call for an alternative to *Gobbledegook*.

The dislike of *amenity* brought to mind the delightful paper called *Amanitas* read by Mr. Hope Bagenal before the Jones Society at Balliol and published in the A.A. Journal of December, 1930.

\* H.M.S.O. 21-.

"The word *Amanitas* in Latin," wrote Mr. Bagenal, "means loveliness of places. We have no equivalent in English. We speak of 'the amenities' and generally add a hope that they will be preserved; they are probably in danger."

But this does not help Mr. B. J. Collins and others who dislike the word *amenity*.

Joseph Gwilt in his *Encyclopædia of Architecture* (1888) wrote "There has lately grown into use in the arts a silly pedantic term under the name of Aesthetics . . ."

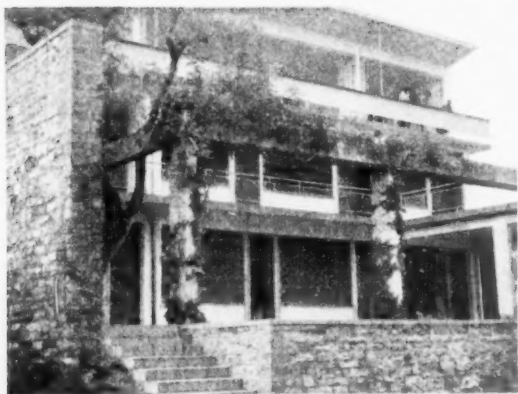
In spite of Gwilt's view, the word survives. Blame then our inability to create our own words, or form them from Greek and Latin originals. Unless we use the word *pleasantness*, with risk of finding ourselves talking of a *pleasaunce*, it is better to stick to *amenity*, unless "spoiling pleasantness" is considered to be in all senses the same thing as "spoiling amenity." "Amenities" of course is out.

It is debatable whether those who are quite unworried by the word itself, would preserve amenity; add to it; fight for it or even to be aware of it, if an alternative word were found. But it is possible that a new word might arouse interest in the quality itself.

*Gobbledegook* is the sort of word that arouses immediate interest. Interest may lead to awareness and awareness to sensibility.

Step by step, then, we have made a case for the invention of a fresh word in place of *amenity*, but in doing so have proved that the new word should, to be effective, be without pleasantness!

What would be the American expression for *amenity*? Pulchritude. There, now, how about *Pulchritude*?



The three views on the left are of the front or lake-side elevation and terrace. Above, top, a general view; middle, side elevation with stair to roof sleeping-balcony; bottom, detail of front elevation.

HOUSE ON LAKE COMO, NEAR CAMPO, N. ITALY  
ARCHITECT: P. LINGERI

Photos: Edward D. Mills, F.R.I.B.A.



## EVENTS AND COMMENTS

## B.B.I. DINNER

Three hundred and forty-odd builders and their guests attended the 92nd Annual Dinner of the Builders' Benevolent Institution in the ballroom at Grosvenor House last week.

I enjoyed my *Délîce de Saumon Condorcet* and my *Caneton d'Aylesbury* all the more when I was told that during the last 30 years no applications for financial aid from indigent and needy master builders of ten years' standing, or their widows, had been turned down by the B.B.I.

Great applause followed the vigorous speech of the President, Sir Albert Braithwaite, for his demands that builders should be free to run their own business and to hell with planners—Tory and Socialist alike. The streak of anarchy that exists in most of us is especially broad in builders, or so it sounded, almost frighteningly, to my ears.

All those architects who were fortunate enough to be guests will bear me out when I say that the next loudest applause followed the President's appeal to architects to furnish their builders with complete drawings *before* the job starts.

I venture the opinion that if this advice is taken—and remember is was recommended in the Working Party's Report—it will further good relations between architects and builders more than any other single factor.

The President of the L.M.B.A., in his very graciously phrased toast to the Visitors, again showed how earnest he is in his determination to improve liaison and efficiency throughout the whole of the building industry. I am with you there, Sir.

The two speakers representing H.M. Government were to have been Mr. Hugh Molson and Mr. Marples, but Mr. Marples was kept at the House for the North Wales Hydro Electric Bill.

So we had instead Sir Luke Fawcett, in his fiftieth year as a trade unionist, and he proposed the Toast of the B.B.I. in a humane and amusing speech which was well received.

I was relieved to see the secretary of the Institution, Major Shingleton, looking as spry as ever. He is an honorary steward at the Rugby Union ground, and I had feared that the frightful weather at the previous Saturday's game between England and Ireland at Twickenham might have given him pneumonia. I under-estimated Major Shingleton.

I have no space to tell you of the songs and entertainment, but I hope I will not be misunderstood when I say that the stories from No. 1 table were not eclipsed by those of the professional.

## PENRHYN CASTLE OPEN TO THE PUBLIC

I was unable to be present myself on this occasion but one of my agents was there and has sent me this account.

Penrhyn Castle, Caernarvonshire, home of the Pennants of Penrhyn, in the Rural District of Ogwen, was opened to the public by Colonel W. H. Wynne Finch, M.C., Lord Lieutenant of Caernarvonshire, on March 29.

The castle and grounds were conveyed to the National Trust in 1951 by Lady Janet Pelham.

The building was commissioned in 1827 and completed in 1840 to designs by Thomas Hopper.

At the opening ceremony Colonel Wynne Finch

referred to the castle as an extraordinary building . . . a pile of masonry. Architecturally it has nothing, yet almost everything. From a distance the building is impressive and its large scale is suited to the fine hill site which it crowns. At a distance it has the appearance of a genuine medieval building miraculously preserved. And although it has only stood for just over one hundred years the preservation of the fabric—the walls are of local stone—is remarkably good.

But as one approaches the castle the detail begins to tell and on entering the main hall and successive rooms the visitor is faced with a conglomeration of bastardized styles which include Norman revival freely treated, nineteenth-century original and Bannister Fletcher assorted ranging from Byzantium to Arabia.

The servants' staircase almost cries out for nautch girls and the main staircase should be seen by all who have not seen the Taj Mahal or who may aspire to decorate wedding cakes.

"Far from elegant . . . yet exceedingly curious" was the pronouncement of a critic 100 years ago. The criticism still holds good. Now it stands preserved a monument of curiosity for all who are curious to see. It is a building which, without facetiousness, should be seen to be believed.

Architecture apart it also stands as a monument to a departed way of life and to a benevolent aristocracy which, in this case, has been renowned for being the owners of one of the best kept and best administered estates in Wales.

Those who visit the Castle should not miss Llandegai village; a miniature garden city development built for Penrhyn Estate workers and designed by Benmore.

Penrhyn Castle is open to the public from now until October at stated times and daily during July and August except on Sundays.

The furniture and paintings have been lent to the National Trust by Lady Janet Pelham. To those who respect preservation of the countryside a picture on the second staircase shows the Penrhyn slate quarries in their early state; a strange and accusing contrast to the piles of unused and unwanted slate which now form the backcloth to the village of Bethesda and a grey gateway to the otherwise unspoiled pass of Nantfrancon.



National Trust

## A.A. RECEPTION

In general pattern one A.A. Reception is much the same as another. The same crowd of familiar faces, the same squash, the same rooms, queues and awnings. With so much carried on from year to year one might expect the occasion to pall. But it certainly does not. It is at once a reunion and a jollification. Many members from outside London only appear at the A.A. on the occasion of the reception, this means that everyone must talk much faster than usual to make any impression at all on the mass of events to be discussed since the last meeting.

I always enjoy the party and did so this year particularly for I thought that the women were even lovelier than usual. A great many of them had new and gorgeous frocks to show off.

I thought that the ballroom decorations were not quite up to the usual standard possibly only because of the somewhat depressingly drooping effect of the ceiling. I once again missed the Dramatic Society's show and so never discovered how they managed to cram nineteen scenes into less than forty minutes.

The exhibitions included Western books on Eastern architecture and needless to say I wanted to turn the tied-down pages and look at illustrations other than the wonderful ones displayed. Early English water colours lent by Mr. Percy J. Westwood toned the walls of the front

members room. Surely, I thought, he would never miss one or two of these if I slipped away with them. Sea shells decorated with pots of cabbage and rhubarb formed a nice foil to the water colours. How terrifying some of the shells must be, when inhabited, to a mere shrimp.

The quiz was ingenious and rather easier than last year. I was getting on well when I was dragged away to the bar. The exhibition of school work was this year supported by some excellent pieces of Industrial Design from the Royal College of Art. Of the architecture I noticed but had no time to study an interesting scheme for re-modelling the enlarged A.A. at a cost of nearly a quarter of a million. I liked the idea of a thesis on useless architecture some illustrations from which were on show. The textiles from the R.C.A. were really impressive. Can one obtain them? I would gladly have taken away a lidded copper dish of beautiful workmanship displayed on one of the tables.

The A.A. is lucky with, or clever in choosing, its presidents. Anthony Chitty carried off the reception in exactly the right way while Mrs. Chitty, beautiful and charming, more than upheld the tradition of graciousness which one automatically associates with the wife of the president of the A.A.

ABNER



Norman Westwood, ARISA

School at Slemdal, a suburb of Oslo, showing an interesting and straightforward use of brickwork and pleasantly proportioned windows.

(This description was erroneously attached to a photograph on page 332 of March 20.)

# NEWS OF THE WEEK

## City and Borough Architects' Society

At the recent Annual General Meeting of the City and Borough Architects' Society, held at the headquarters of the R.I.B.A., the following officers were re-elected: *President*: Leonard C. Howitt, B.Arch., Dip.T.P., D.P.A., F.R.I.B.A., M.T.P.I. *Vice-president*: C.C. Shaw, B.Arch., F.R.I.B.A. *Hon. Secretary*: Johnson Blackett, F.R.I.B.A. *Asst. Hon. Secretary*: M. H. Forward, F.R.I.B.A., F.R.I.C.S. *Hon. Treasurer*: G. Kenyon, Dip. Arch., Dip. T.P., F.R.I.B.A., M.T.P.I.

## The Architecture Club

A supper of the Architecture Club was held at Chez Auguste, Soho, on Wednesday, April 2, followed by a debate on the proposition: "That no building should now be designed to last more than a lifetime." Viscount Esher presided. The debate was opened by Mr. Robert Furneaux Jordan, F.R.I.B.A., and Professor A. E. Richardson, R.A., F.R.I.B.A., and was continued by the Rt. Hon. David Eccles, M.P., Sir Lancelot Keay, Miss Jocelyn Adburgham, Mr. H. P. Cart de Lafontaine, Mr. Wells-Coates, Mr. S. E. T. Cusdin, M. E. M. Joseph, Mr. O. P. Milne, Mr. Peter Shephard, and Mr. Ralph Tubbs.

## Bracknell New Town Draft Plan

A Public Exhibition of the Draft Master Plan of Bracknell New Town will be held at the British Legion Hall, Rochdale Road, Bracknell, Berkshire, from April 22-27, 10 a.m.-8 p.m., Sat. 10 a.m.-6.30 p.m., Sunday 12 noon-6 p.m.

The Minister of Housing and Local Government has approved, with modifications, the development plans for the City of Chester and for a neighbouring area consisting of Hoole Urban District and parts of Chester Rural District.

The plans, as approved, will be deposited in the districts concerned for inspection by the public.

## The Building Surveyors' Institute

The Building Surveyors' Institute whose inaugural meeting took place in Sheffield on March 1 last, held their second Executive Council meeting and some of the decisions were as follows:

Founder membership is open to Building Surveyors who have a minimum of five years' approved experience or to persons who have had five years' approved experience as Building Surveyors but are not now employed in this capacity and are still engaged in the Building Industry.

"Non-graded" membership can be granted to the junior Building Surveyor

or the Building Surveyor who has not had the necessary five years' approved experience. These "Non-graded" members may eventually be graded as Licentiates or Graduate members of the Institute.

The next Executive Council meeting will be held in London on April 26, and on Saturday, May 3, an open meeting will be held in Birmingham, and invitations are extended to all interested persons.

The Council dealt with a large number of applications, some of these were elected as Founder or "Non-graded" members, whilst some were rejected owing to ineligibility. The Council have had to defer consideration of a large number of applications for the next meeting.

Mr. Gordon Smith, 67, Thorpe House Avenue, Sheffield, 8, has been co-opted as a member of the Executive Council to represent the Yorkshire Area.

## Regional Housing Production Board Set Up for the East and West Ridings

The Housing Production Board for the East and West Ridings of Yorkshire has now been set up. Its headquarters will be in Leeds.

The members of the Board are:—

*Independent Chairman*: Mr. H. Woodhead, O.B.E., J.P. of Shipley, Yorkshire. *Chairman of Jowett Cars, Ltd.*

*Representatives of the Building Trades Employers*: Mr. Wilfred Horsfall of Messrs. George Horsfall & Son, Liversedge. Mr. Lewis Morrell of Messrs. L. & W. Morrell, Ltd., Bradford.

*Representatives of the Building Trades Employers*: Mr. Wilfred Emmott, Regional Secretary of National Federation of Building Trades Operatives. Mr. A. Hanson, Divisional Secretary of the Amalgamated Union of Building Trades Workers, Yorkshire.

*Ministry of Housing and Local Government Representative*: Mr. M. B. Tetlow, Principal Regional Officer.

*Ministry of Labour and National Service*: Mr. S. D. Morton, Regional Controller.

*Ministry of Works*: Mr. C. C. Burdge, Regional Director.

## Housing Progress—February

The number of permanent houses completed in Great Britain during February was 16,163 compared with 15,692 in January and 13,984 in February, 1952.

The total number of houses completed under the post-war programme is now 1,205,350 (1,048,204 permanent and 157,146 temporary).

## The American Library

The American Library, at 41, Grosvenor Square, W.1, has recently opened an industrial section, which includes

American books, periodicals, government documents, and other literature in the fields of technology, engineering, management, trade and agriculture.

Books and other material can be borrowed by anyone in Great Britain and, where necessary, will be sent by post. In cases where a book or periodical is not available for loan, photostatic copies of special articles will be provided free of charge. The Library also answers requests for information received by telephone or letter.

The Library works in close co-operation with British technical libraries and specialized research agencies, and acts as liaison with appropriate agencies in the United States where information in its own collection is not sufficient. It has full access to existing special American indexes which give complete reference by subject of all articles or books published throughout the English-speaking world.

The Library is open to the public, Monday to Friday, from 9 a.m. to 6 p.m. All service is free and enquiries are welcomed.

Communications should be addressed to: *Industry Section, American Library, 41, Grosvenor Square, London, W.1.*

Enquiries will be answered by calling Grosvenor 9000, extension 447 or 748.

## PARTNERSHIP

Mr. D. C. Denton-Smith, L.R.I.B.A., 40, Regent Street, Cambridge, announces that, as from April 6, 1952, he is taking into partnership Mr. Norman Russell, A.R.I.B.A., and Miss Mary H. Davey, A.R.I.B.A., from which date the practice will be continued under the style of "D. C. Denton-Smith and Partners, Chartered Architects (Surveyors)," the office address and telephone numbers remaining unchanged.

## COMING EVENTS

### Royal Institution of Chartered Surveyors

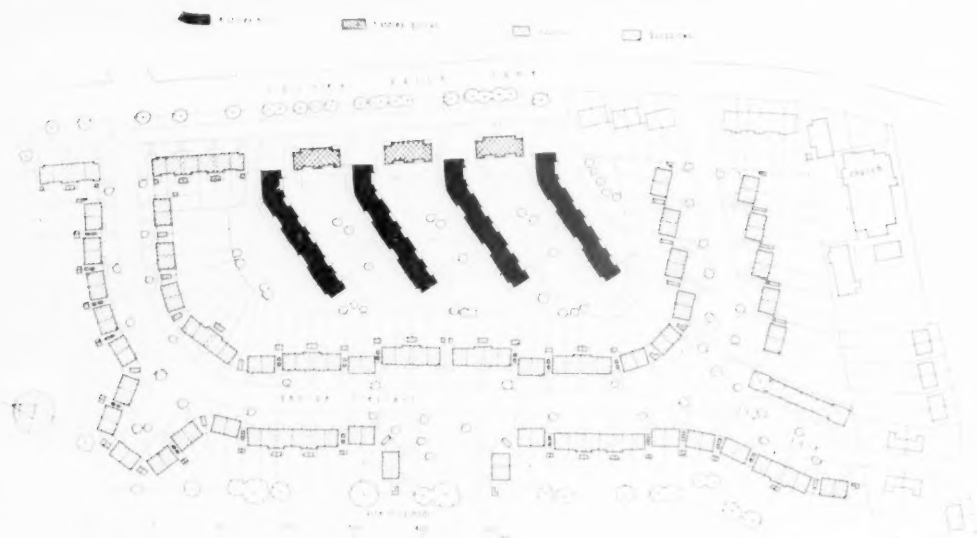
April 16 at 6 p.m. General Meeting. Discussion on "Can the Standard Method of Measurement be Improved?" To be opened by Mr. P. T. Walters, F.R.I.C.S., Mr. A. Prichard, F.R.I.C.S., and Mr. E. S. Chalkley, A.R.I.C.S., at 12, Great George Street, S.W.1. Admission by ticket only. Application should be made to the Secretary.

### Institute of Public Relations

April 17 at 6.30 p.m. Talk by Misha Black, O.B.E., F.S.I.A., M.Inst.R.A., on "Design and the Public—The Influence of the South Bank and Battersea," at 1, York Gate, Regent's Park, N.W.1. Admission by ticket only.

## CORRECTION

R.I.B.A. Library Group.—The date of the next meeting is on April 7, and not April 17, as printed in last week's issue.



## Housing Scheme for Friern Barnet U.D.C.

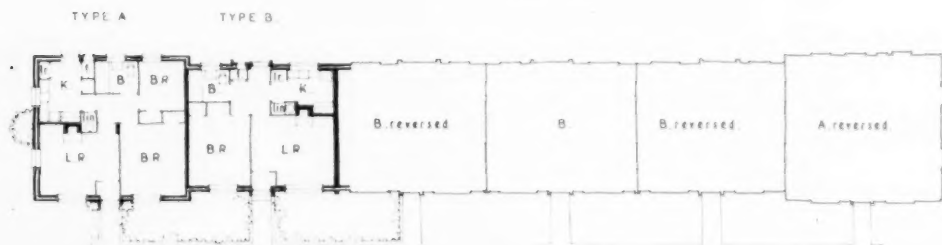
KENNETH R. SMITH, A.R.I.B.A., A.A. Dipl.  
architects;  
W. W. ATKINSON, O.B.E., A.R.I.B.A., A.A. Dipl.

Type	SCHEDULE OF ACCOMMODATION				Floor Area	Number of Dwellings	Totals
	Double	Single	Total	Bedrooms			
Houses	2	—	2	3	950	92	118
	3	—	3	3	1,075	13	
	3	1	4	4	1,180	13	
Bungalows	1	—	1	1	500	4	6
	1	—	2	2	575	2	
Flats	2	—	2	2	690	26	114
	2	1	3	3	780	60	
	3	—	3	3	810	16	
	3	1	4	4	935	12	
Total number of dwellings provided						238	

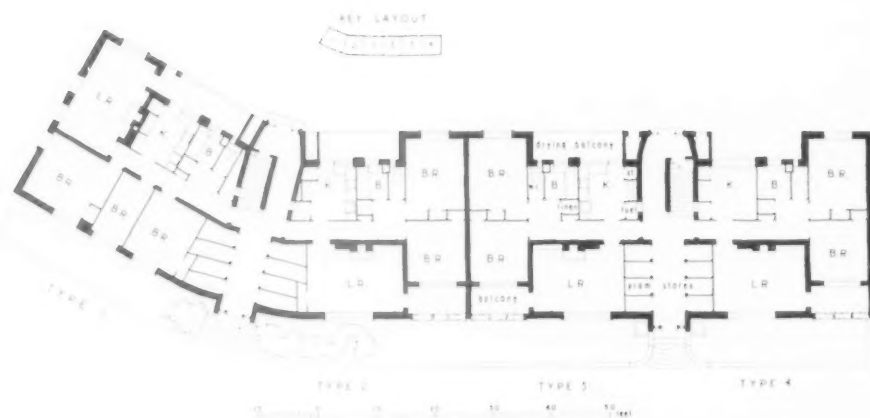
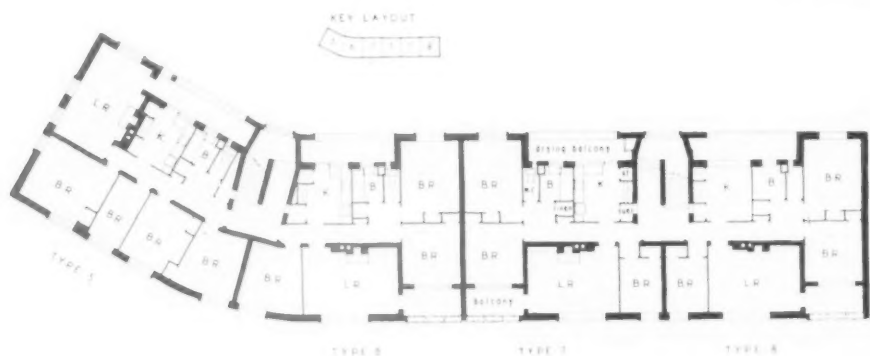
### Site

This Estate has been developed in stages over a period of four years under a number of small contracts varying from four to 34 dwellings per contract, and was completed during 1951.

The site, which lies to the South of the North Circular Road, has an area of approximately 15 acres and a main road frontage of 820 feet. The land falls to an old ditch line by which it is bisected, and the maximum difference in level is 40 feet. Owing to the falls and the clay subsoil considerable difficulties of site drainage have been encountered.



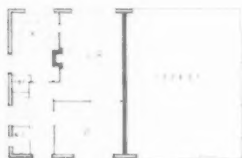
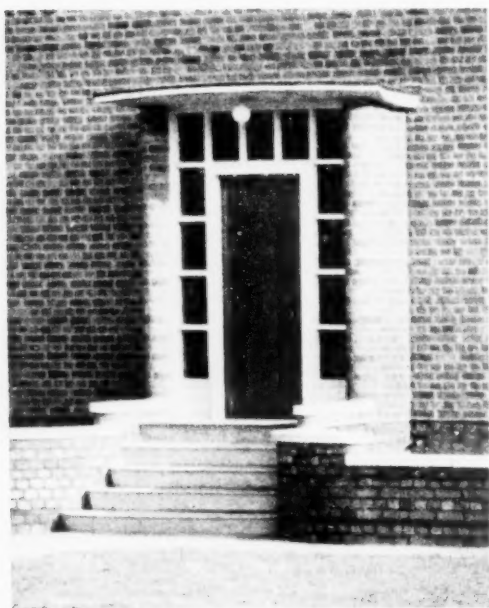
Old People's Dwellings, 1- and 2-bedroom types



Four-storey block of 3- and 4-bedroom flats: the plans show pairs of flats at each extremity of the blocks



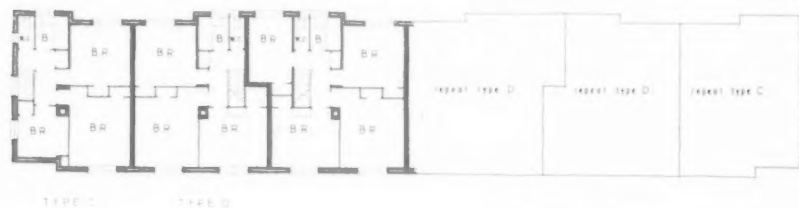
Three-bedroom, South Aspect type



Quantity Surveyors :  
H. J. VENNING AND PARTNERS  
Engineer and Surveyor :  
J. MARSHALL, M.I.M.U.E.

HOUSING ESTATE FOR FRIERN BARNET U.D.C.





Three 3-bedroom, one 4-bedroom terrace houses, East Aspect type

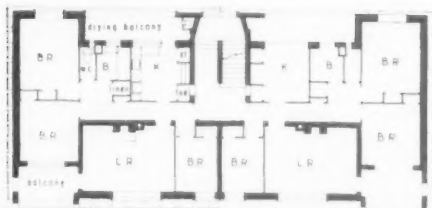
ARCHITECTS: KENNETH R. SMITH AND W. W. ATKINSON

*Continued from page 425*

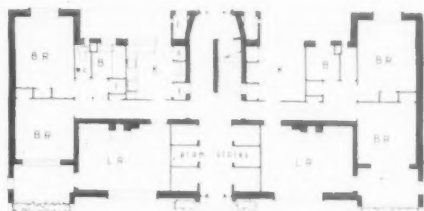
### Planning

The layout of the site was controlled to a certain extent by two existing points of access, other than the main frontage, and by the wide access which was required on the West boundary to the adjoining land which is a school site. An approximately equal number of houses and flats was required with a few bungalows for old people at a density of 75 persons to the acre, and it was decided that the flats should be off a service road on the main frontage. Lifts and balcony access were not desired, and the flats are therefore provided in four four-storey blocks and three smaller three-storey blocks, with staircase access, the larger blocks being planned to lie along the contours so that the difference in level, which is as much as a storey in height between blocks, improves the angle of light on the living room elevations. Cycle stores have been provided under two of the smaller blocks where the slope of the ground has made this possible. It was found necessary to plan the houses with a narrow frontage, and the standard three-bedroom house is only 20ft wide overall the main building. Nearly all the flats have living room and kitchen balconies.

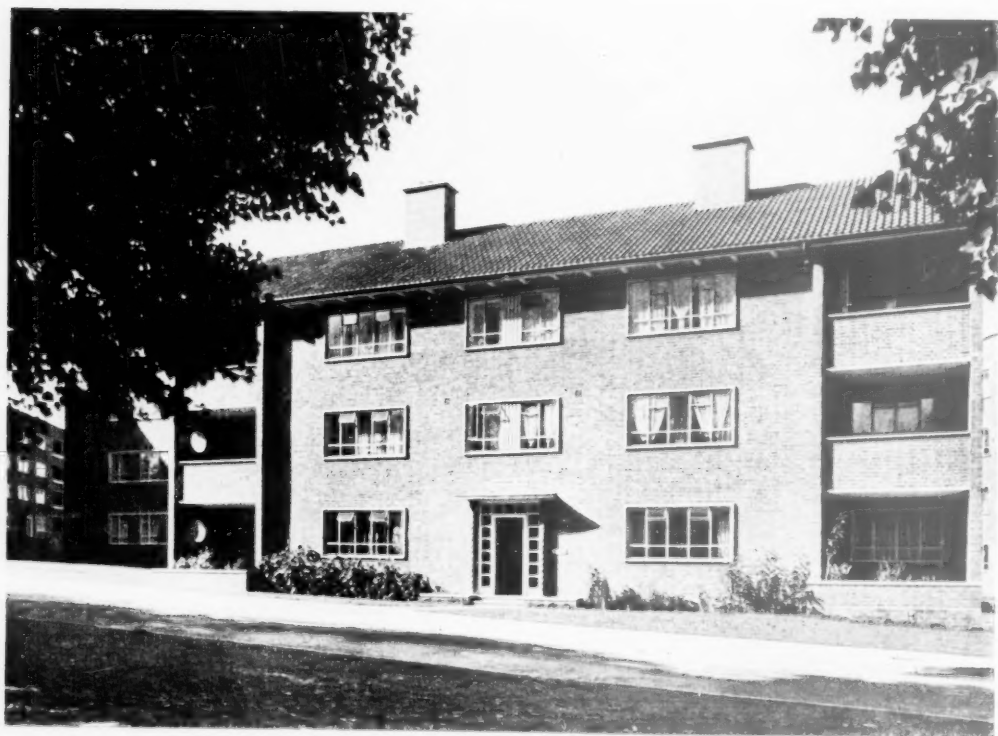
The houses are connected by screen walls, and the space between the houses and the footpath, which is unfenced, is turfed and planted with trees and is maintained by the Council. The open space around the flats is similarly treated.



3-storey type 3-bedroom type upper floor



3-storey block 2-bedroom type, ground





Three-storey blocks

## CONSTRUCTION AND FINISHES

**Houses**

External walls 11in cavity brickwork, party walls 9in brickwork, partitions 4½in brick and 2in breeze blocks. Facings Surrey and Sussex Stocks.

Ground Floor concrete slab with coloured asphalt, Semastic tile or "plasticork" finish, kitchens coloured Granolithic.

First Floor and Roof traditional timber construction with trussed roof purlins.

Roof covered with Norfolk Pantiles or Belgian Interlocking Pantiles over untearable felt. Slag wool blanket roof insulation.

Windows galvanized steel in precast concrete surrounds.

**Flats**

External walls 13½in load-bearing brickwork, other structural walls 9in brickwork, partitions 2in breeze blocks. External Facings Surrey and Sussex Stocks.

Internal Facing to stairs White Flint Bricks.

Ground Floor concrete slab.

Upper Floors hollow tile slabs with ½in insulation board, subsequently set with plaster, as permanent shuttering and sound insulation.

Roof slab battened on underside for plasterboard to provide air space for electric conduit and heat insulation. Flat roofs covered with asphalt, pitched roofs in timber

construction covered with clay double Roman tiles over felt. Floors of habitable rooms mainly finished with wood blocks, kitchens and bathrooms, etc., with coloured Granolithic. Windows galvanized steel with reconstructed stone surrounds and flower boxes.

Staircase grilles in reconstructed stone.

**Equipment**

All dwellings are provided with solid fuel appliances in living rooms which also heat two radiators for "back-ground" heating in other rooms, and calorifier for domestic hot water.

Dust chutes were required for all flats and are provided from kitchen balconies with bins at ground level.

The flats have roof aerials for wireless reception with wireless points in each flat.

Gas or electric cookers, wash boilers and refrigerators are made available to tenants.

**Cost**

The building costs, excluding the separate contract for the road and main sewer, but including all work in the building contracts and including abnormal site works arising from the slope in the ground are approximately as follows:—

Houses 25s 6d to 27s 3d per ft super.

Flats 41s to 41s 6d per ft super.



*The centre of Nairobi, looking along Delamere Avenue.*

## KENYA as I saw it

By G. H. C. PERKIN, A.R.I.B.A.

**I**N case any of you are feeling irked by conditions prevalent in England at the moment, and consider that this is the moment to "arise and go now," here are some impressions of Nairobi, from where I have just returned.

I suppose that of the vast area of this world vaguely known as "abroad," Kenya is quite a good approach to the Promised Land. It has quantities of milk and a fair abundance of honey, too. Oh yes, and plenty of flies in the moment.

Perched 5,500 feet up in the hills, Nairobi is situated almost bang on the Equator. But don't let that put you off, because being so high up, the climate for most of the year is rather like a pleasantly warm English summer.

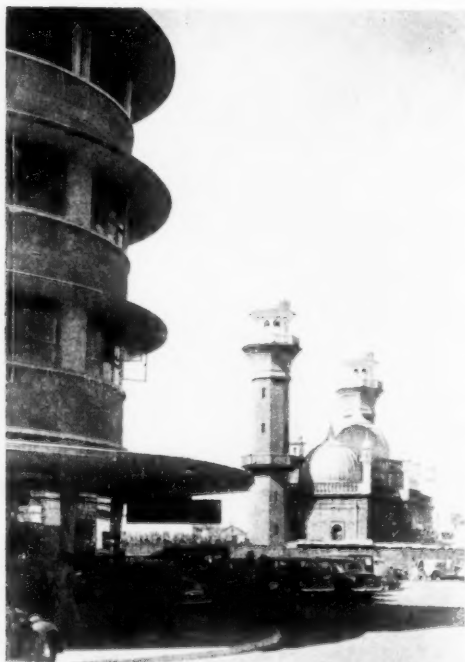
The population is variegated but interesting, and consists of roughly 120,000 people.

The Africans, of which there are 65,000, predominate and provide most of the semi-skilled and unskilled labour. Treated properly, old "Kamau" is a very pleasant fellow to get on with, but naturally resents being shouted at as much as you or I do. He is naive but quite averagely intelligent; hard working, providing he has a fair deal, and with a marked sense of humour. I liked him a lot.

The Asian community comes next on the list, and is very much larger than one might at first imagine. Most of them are Indian and amount to about 42,000 people. Consequently their importance must not be underestimated, for their influence in many spheres of life, including building, is naturally very pronounced. Apart from those in executive positions, they also form most of the skilled labour. Nairobi building contractors are nearly all Indian and have a very highly developed business acumen. So bear this well in mind.

The European population amounts to about 11,000 and operate largely in professional, executive or military capacities. All architects of note naturally come into this group.

As regards the non-architectural Europeans, or prospective clients, it is perhaps a little unfortunate that English people living in Kenya are, in actual fact officially termed "exiles," which sounds nasty, as you will agree. But on



*The corner of a block of offices and the Mosque at Jamaa, Nairobi.*



Three views of the street architecture of Nairobi



the other hand, it does describe rather neatly the lines on which people's minds run when they are thinking of building themselves a house. For, in domestic architecture, the general inclination is towards "nostalgia for England," which often means Stratford-on-Avon or Compton Wynyates.

How many times have people come to me with small pieces of squared paper and the words: "I'm thinking of building myself a little house." Apart from its planning impossibilities, the little house invariably turns out to have a roof pitched at no less than 60°, heavily mullioned windows like slots, and a liberal sprinkling of four-centered arches. Nor is it a bit of good at this stage to turn pale, or break out into a cold perspiration, for no amount of gentle persuasion will bring them down from their Tudor turrets.

Now that we have got the general picture dimly in mind, let us get down to the all important question of "scope." And I may say, here and now, that there is an abundance of it. Anybody who can draw two parallel lines is certain of a respectably paid job. For everyone is building like mad and, although I should hate anyone to accuse me of being uncharitable, "mad" isn't such an ill-chosen adjective either.

What is happening in Nairobi now is exactly what happened in England between the two Great Wars. Development is going on apace in all directions, often indiscriminately, and even comes pretty near the "ribbon" variety in places. Of course, there is The New Plan. But then I feel that it would take a considerable amount of time to undo all the mistakes that are being made now.

Things are happening so fast that a great deal of land, inhabited only a short time ago by wild animals, is now closely peppered with rather repellent-looking villas. Which is a great pity when you consider that Kenya is a land of sunshine, still capable of gaiety and freedom, and with endless possibilities for fresh and creative work.

Not only is there unlimited scope in the domestic sphere, which, I'm sure that many feel, would be like a breath of fresh air, but also in the more technical and commercial world. Vast white blocks are rearing their heads over the town in ever-increasing numbers. Shops, flats, offices, factories—more and more are needed as commerce and the population increase. For never let it be forgotten that Nairobi is at present a boom city. Quite an oddity these days.

Consequently, with all this activity going on, architects hardly know where to put themselves. But their predicament, all the same, is very largely due to the fact that they have not got the right kind of staff to cope with the situation. Many are having to rely, to a large extent, on totally unqualified people to fill the breach.

The work is all there for anyone who feels energetic enough to go and try their luck.

Let me now describe to you in rather more detail what is already there and what is being done at the present time.

At first sight Nairobi strikes one as being chaotic, to say

the least of it, as the illustrations show, I think. Parallel with the medley of races jostling each other in the streets, you also find a quite startling variety of buildings surrounding them.

The two main arteries, Delamere Avenue and Government Road, are themselves long and of generous proportion with fine stretches of greenery down the centres. But it is a pity that one cannot merely walk down the middle with blinkers on, for in Delamere Avenue classical columns rub shoulders with half-timbered "Elizabethan," while in Government Road all that can be plainly discerned is a long vista of signboards. These are quite lamentable, to say the least of it. Nor does there seem to be any line of continuity anywhere, for the skyline rolls and pitches drunkenly along in a series of hiccoughs.

I must say that all this rather shook me to begin with. Because I had imagined a Brave New World springing up in England's youngest colony. A city bristling with brissoles and balcony terraces and light airy pleasant features. Instead of which, it appears that Nairobi has crammed every conceivable style—Eastern or Western—down its throat and developed a sort of architectural colic as a result.

What, of course, is all important is the corrective medicine that is now being administered. And in case I seem to be getting unnecessarily gloomy let us look on the sunny side for a while.

There is undoubtedly a lot of excellent stuff being produced. Sadler House and the new St. Andrew's Church, for example. The latter is constructed mainly of parabolic r.c. arches, with external walls of local stone relieved with concrete dressings around windows. A low-pitched roof of



Ernst May's Delamere Flats—the first scheme of its kind in Nairobi. The illustration shows blocks of two or three bedroom flats, but there are others of the "bachelor flat" type as well.



New flats for British immigrants

Roman tiles and an original tower go to make this the most successful building in Nairobi. Though there are people who say it looks like a restaurant.

Ernst May's Delamere Flats have caused the most fearful hubbub. To rise up in public and openly defend them would lead to nothing short of social ruin, because Nairobi considers them so unspeakably vulgar.

Planned on Swedish lines, they undoubtedly have their faults. They are, for instance, rather cramped on the site and also rather congested inside as well. Also they are, at present, surprisingly pink. But then that will doubtless tone down with the passing of time. In any case, I see no justification for referring to them as slabs of nougat. Because it seems fairly evident that they are a thoroughly honest and straightforward solution to a difficult problem and several steps forward in the right direction.

I do not propose to go into laborious detail about other new works in Nairobi, because unless one can see them in the flesh, it is difficult to envisage things from a description.

But I would say that there seems to be a certain crudity about many of them. There are too many large slabs of make-I-looking concrete and not really enough attention to detail anywhere. Thick bands of projecting e.c. canopies over windows are the general rule, as protection against the vertical sun. But in their unrelieved severity they merely make buildings look heavy. They also look particularly unpleasant when radiating from corner entrances, with

glazed vertical features over them. This is an extremely common practice in Nairobi, and is vaguely reminiscent somehow of the Victoria Coach Station.

The general dearth of skilled craftsmen, who are mainly Indian, may have something to do with this lack of refinement. But I don't believe that the fault is entirely theirs.

You must also expect to find there a fair amount of "Shell Mex" building. Large bleak cliffs are wont to rise every now and then, pierced with monotonous rows of standard metal windows. I don't find these very exciting, either, and it is a pity when you consider they were built in the last two or three years and the important positions that they command in the heart of the city.

Beyond the municipality limits, tentacles of grey and pink houses stretch out towards the wide open spaces beyond; right out to the borders of the Game Park, which is a limitless flat plain of imposing grandeur reaching almost to infinity. Indeed, the horizon seems so flat and distant that one could almost imagine at times that one were looking at the ocean. The only element to break the illusion is the vast bulk of Mount Kilimanjaro, which occasionally rises



New offices of the East African Power & Lighting Company, Nairobi





The new St. Andrew's Church, Nairobi. The main body of the church is spanned with r.c. parabolic arches. Local stone provides the facing material, with Roman Tiles for the roofing. An interesting study in contemporary church design.

maiestically like a huge pudding out of the distant haze. It is a remarkable sight, and a dramatic architectural setting, too.

But grey and pink houses are what one finds around these parts. The dull grey of the local stone, and the insipid pink of the "Mangalore" tile roofs. With standard metal windows painted dark green, you can imagine that the general effect is not very stimulating.

But Nairobi people are obsessed with the idea that the local stone used by itself is beautiful. Whilst actually it isn't anything of the sort. It's as dead as mutton—unless used imaginatively with some contrasting element, when it can be quite attractive. It is astonishing what a concrete dressing, or even a little white paint on the windows will do.

Metal windows have to be used everywhere because of the white ants, which have a strong taste for any exposed unseasoned timber. As there is hardly any of the seasoned variety available, it is regrettably quite unavoidable.

The pink Mangalore tiles are also rather unfortunate because, as I say, they do not look well with the local stone,

and are lacking in texture anyway. They are, however, the cheapest and most common form of roofing; although I, personally, feel that I would go to great lengths to avoid using them as there are infinitely more attractive alternatives, and the additional cost not really prohibitive.

The most popular form of local wood used internally is something called Mvuli, which has a slightly reddish tinge. Like the local stone, it has a great vogue used in its natural state and in enormous quantities. Every stick of furniture is Mvuli. There is Mvuli all up the stairs and in every bedroom. This, coupled with the fact that nearly all floors in important rooms are of polished cedar blocks covered by a very occasional rug, makes for a rather tiresome standardization. The inside of the Smith's house seems very akin to that of Jones, even though the accommodation and general planning differ enormously. So that after a while, whenever confronted with acres of reddish-brown Mvuli, one's immediate reaction becomes "paint it."

There may be some excuse for the general lack of inspired planning, due to the local scourge in the way of burglars and "pole-fishers." (These gentlemen are given to coming in the night with long poles and fishing your best suit off the bedroom chair and out through the window.) Consequently, this puts a brake on too much open planning or liberal fenestration, and necessitates some form of bars or expanded metal over the windows.

All the same, as there are satisfactory solutions to most planning problems, I am sure that all avenues have not been explored in this respect. And this is a case in point when I say that Kenya is an excellent country to go to at the present time.

What it so desperately needs is a few new brooms to go and do a bit of conscientious sweeping. It wants a new architecture, based on the social, climatic and material problems of the day. These problems are admittedly not to be sneezed at, but they are of an essentially fascinating and absorbing nature. And I am convinced that interesting solutions exist, if only a few more enterprising architects would go out and solve them!

So there it is, all ready and waiting for you, should you feel inclined to go and try your luck. I have probably laid undue emphasis on the less attractive aspects, but I have done it purposely because I do feel so strongly that there is endless scope for new ideas and general improvement.

Here is, virtually, a brand new city in the making, barely beyond adolescence but with limitless possibilities for the future, and crying out for young architects to come and breathe life into its architectural veins.

And that, you must admit, is quite something nowadays.



A recent block of offices in Nairobi. Built on an r.c. frame, the plan is of an "E" formation and makes original use of local materials.

# Super Purity Aluminium Roof

KINGSWORTHY PRIMARY SCHOOL, WINCHESTER

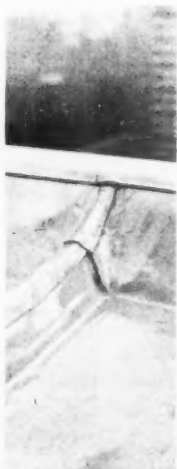
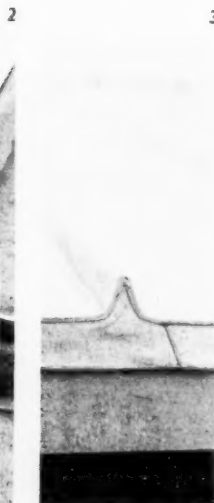
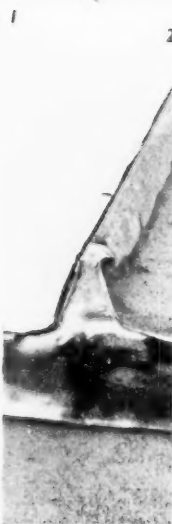
**T**HIS new super purity aluminium roof on the new Primary School at Kingsworthy covers an area of some 7,500 square feet and used 2 tons of 22 s.w.g. aluminium. The conical roll method of jointing was specified by the County Architect, Simpson Low, A.R.I.B.A., and the fixing contractors, Builders Iron & Zincwork Ltd., found that the super purity aluminium was well suited to the standard hard metal roofing technique employed.

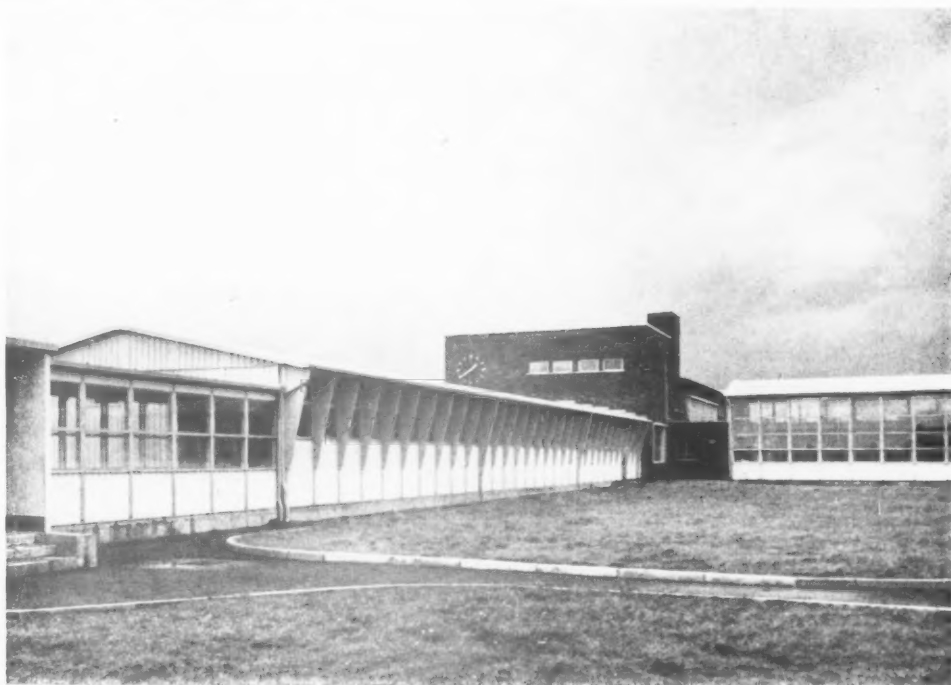
The sheeting of the roof is laid on wood wool slabs with an underlay of inodorous felt. The roof of the Assembly Hall is the more interesting as it used the single lock welt joint between overcloak and undercloak, dressed down one side of the conical batten roll.

The illustrations show: 1. Staggering of cross-welts. 2. Roof sheet and drip apron at roll end ready for mating with neighbouring bay sheeting. 3. Treatment of end of conical roll. 4. Finish of roll at ridge. 5. Bay panel in position with half welts formed preparatory to mating with neighbouring panels. Note underfelt, dog-ear treatment of upstand and cleats. 6. Step flashings of chimney stack and finish to back of gutter.

Although super purity aluminium was first used in roof work as recently as 1948, patent glazing flashings were fixed to a roof in Glasgow in 1927 and are after 25 years exposure claimed to be still in excellent condition.

The General Contractor for the School was H. N. Edwards.





*Part of the School from south-east.*

## **NEW PRIMARY SCHOOL, SANDFIELDS, PORT TALBOT for the Glamorgan County Council**

*County Architect: L. R. GOWER, F.R.I.B.A.*

*Deputy Architect: E. A. E. EVANS, A.R.I.B.A.*

**T**HIS new two-form entry School for 300 junior and infant pupils has been erected on a site reclaimed by the removal of sand dunes. Special foundations consisting of reinforced concrete rafts to bear the whole structure were necessary on account of a variable water table approximately 3 feet below the sand and a possibility of future mining subsidence.

Accommodation was required to provide a junior department with seven classrooms, assembly hall and stage, two ante-rooms, chair store, junior and infants' dining halls, kitchen and servery, staff rooms, medical inspection waiting and recovery rooms, cloakroom and sanitary offices. In addition, an infants' wing contains three classrooms, staff room, cloakrooms and sanitary offices.

It was decided that while the main accommodation should be of permanent aluminium "Bristol" construction, the assembly hall block should be traditional.

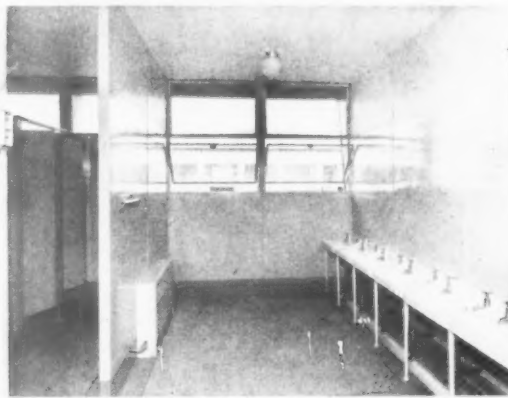
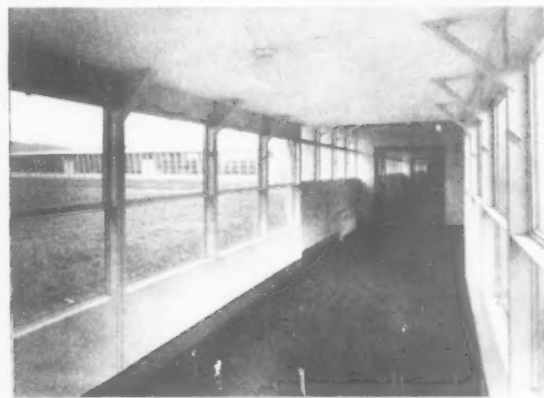
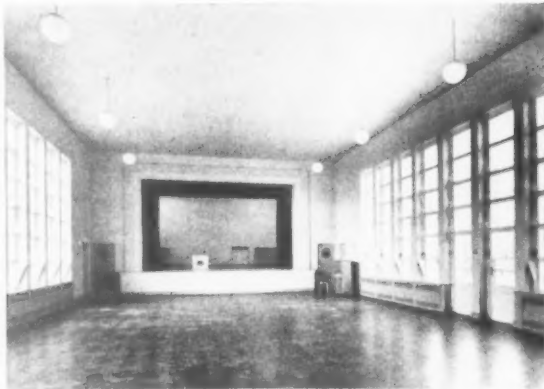
Provision for extension at a later date was also to be allowed for.

Building work was carried out in three stages, first the reinforced concrete raft was constructed and drainage work carried out. Secondly the aluminium section of the School was erected and lastly the traditionally built assembly hall, ante-rooms, entrance hall, tank tower, etc. were completed with finishes, fittings and site work.

The prefabricated aluminium superstructure is built of units selected from the "Bristol" Mark I range of components. Classroom wings spanning 24 feet 3 inches by 12 feet 6 inches high are flanked by an 8 feet high lean-to corridor. The lavatory and cloakroom blocks spanning 16 feet 3 inches by 9 feet high are connected to the corridors by link units. The staff wing has the same dimensions as the lavatory and cloakroom block and forms with the corridor a connection between

*Continued on page 435*





Top left: Classroom.

Bottom left: Corridor.

Top right: Assembly Hall.

Bottom right: Cloakroom.

continued from page 433

junior and infants' department. The dining room (24 feet 3 inches span by 12 feet 6 inches high), kitchen and servery are linked to the brick-built entrance hall.

The roof over the assembly hall is of aluminium with trusses at 4 foot centres spanning 24 feet 3 inches.

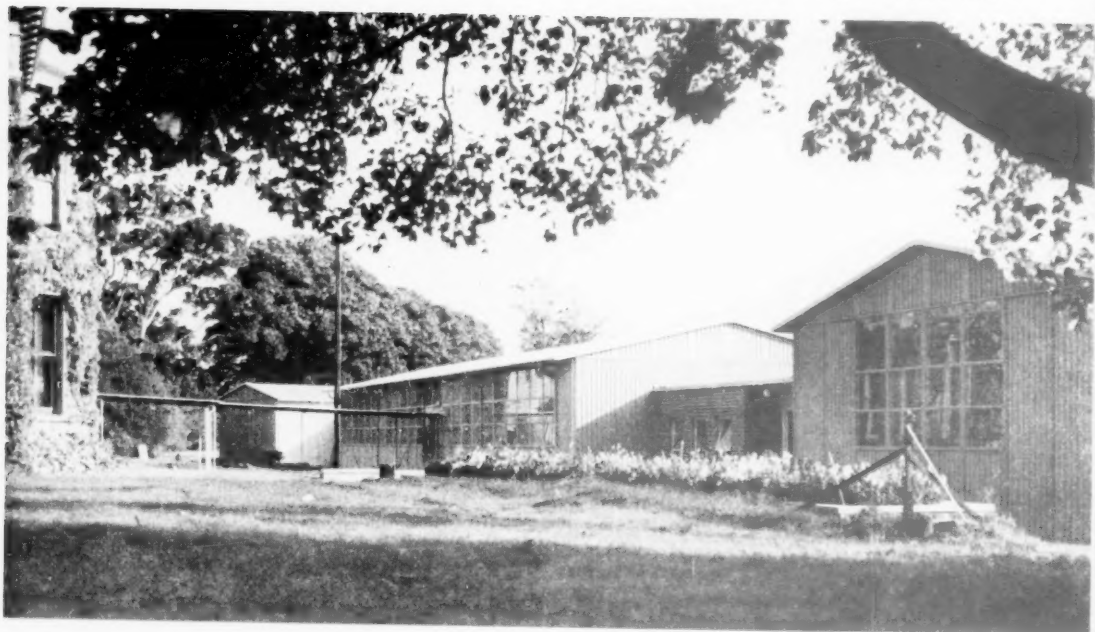
Finishes include French Beech block flooring in the classrooms and Rhodesian teak flooring in the assembly hall and ante-rooms. Composition tiles are used in dining rooms, corridors and cloakrooms, while Terrazzo is used in lavatories and drying rooms etc. Windows of the assembly hall block are of aluminium construction and controlled by coupled gearing. The main entrance doors are anodized aluminium. The rear wall of the assembly hall has been faced with acoustic celotex tiles.

GENERAL CONTRACTORS: G. PERCY TRENTHAM LTD.

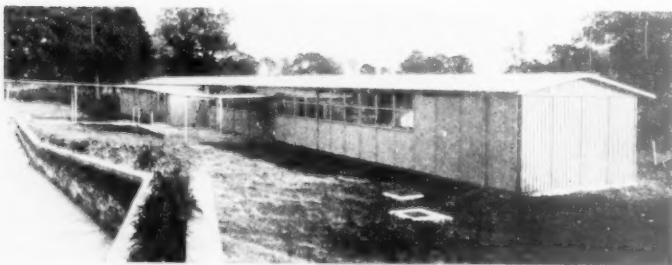
#### Sub-Contractors

Aluminium Construction: The Bristol Aeroplane Co. (Housing) Ltd. Acoustic Celotex Tiles: Horace W. Cullum & Co. Ltd. Aluminium Windows and Doors: John Williams & Sons (Cardiff) Ltd. Bitumen Roofing: William Briggs & Sons. Bricks—Facing: The Star Brick & Tile Co. Coat of Arms: H. H. Martyn & Co. Ltd. Concrete Floor Units: The Penarth Concrete Co. (1927) Ltd. Cloakroom Fittings and Equipment: James Gibbons Ltd. Doors to Main Entrance: James Gibbons Ltd. Dining Furniture, Locks etc.: James Gibbons Ltd. Electrical Installation: Hartley Electromotives Ltd. Fibrous Plasterwork: A. C. V. Telling (Cardiff) Ltd. Fountains for Drinking: J. & R. Howie Ltd. Gates: Proctor Bros. (Wireworks) Ltd. Heating and Domestic Hot Water System: G. N. Haden & Sons Ltd. Kitchen Ventilation: G. N. Haden & Sons Ltd. Sanitary Ware and Fittings: Shanks & Co. Ltd. Semicircle Tile Flooring: The Western Trinidad Lake Asphalt Co. Ltd. Stage Curtains and Truck: W. J. Forster & Co. Ltd. Terrazzo Floors: Jaconello Ltd. Tower Clock: John Smith & Sons. Wood Block Flooring: The Acme Flooring and Paving Co. (1904) Ltd.

NEW PRIMARY SCHOOL, SANDFIELDS, PORT TALBOT



**ALUMINIUM EXTENSION TO MENTAL HOSPITAL**  
**Muckamore Abbey, Belfast, Northern Ireland**



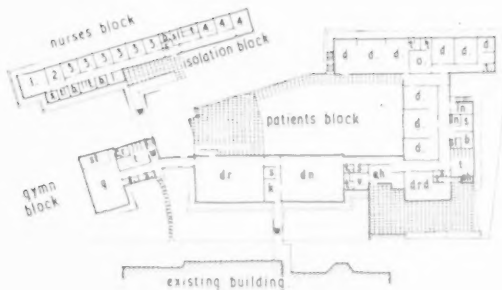
*Nurses and Isolation block*

ARCHITECTS  
 T. A. HOUSTON  
 D. Arch., A.R.I.B.A., A.M.T.P.I.

Major E. W. BEAUMONT  
 B.Arch., A.R.I.B.A., A.M.T.P.I.

**KEY TO PLAN**

- |                      |                             |
|----------------------|-----------------------------|
| 1. Lecture Room.     | t. Toilet.                  |
| 2. Common Room.      | d. Dormitory.               |
| 3. Nurses' Bedrooms. | d.n. Dining Room.           |
| 4. Isolation Wards.  | d.r. Day Room.              |
| 5. Bathroom.         | d.r.d. Doctors and Dentists |
| 6. Laundry.          | Room.                       |
| 7. Store.            | e.h. Entrance Hall.         |
| 8. Stair.            | k. Kitchen.                 |
| 9. Toilet.           | l. Litter.                  |
| 10. Covered Walk.    | o. Observation Room.        |
| 11. Changing Room.   | sh. Shower and Footbath.    |
| 12. Gymnasium.       | v. Visitors Room.           |
| 13. Stage.           |                             |





**T**HIS new extension to Muckamore Abbey Mental Hospital makes use of "Bristol" permanent aluminium buildings to provide accommodation for 70 patients, together with special accommodation for the nursing staff. These are the first premises to be designed and built in Ulster for care and training of patients suffering from arrested or incomplete mental development and represent a preliminary step in the plans of the Northern Ireland Hospital Authority to develop the Muckamore Abbey estate into a 1,000-bed colony.

The new extension, which cost £68,000, was opened on March 21 by Senator Lieutenant-Colonel the Rt. Hon. A. R. G. Gordon, C.B.E., D.S.O., D.L.

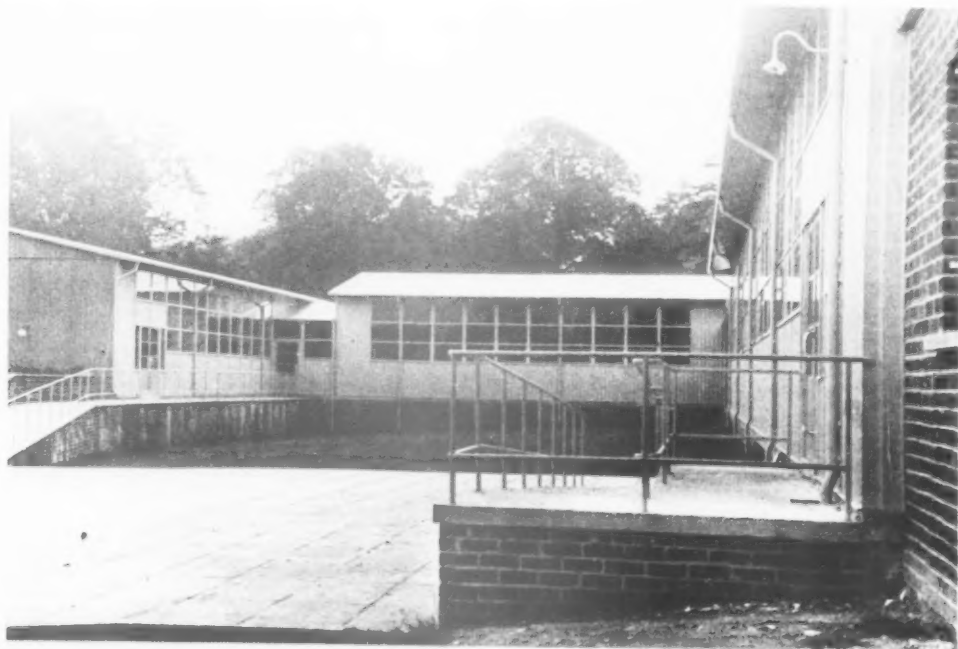
Accommodation, which is arranged in three blocks—patients, nurses quarters, gymnasium and recreation hall—as shown in the diagrammatic plan, includes:—(a) two large dormitories each of 20 beds, two dormitories and two

single bedrooms; (b) a day room for 50 patients; (c) a dining-room for 50 patients; (d) a recreation hall with a permanent stage, also to be used as a school; (e) a separate nurses' home for six nurses, with sitting-rooms and lecture room; (f) accommodation for visiting doctors and dentists; (g) storage accommodation in a basement beneath the dormitories.

An aluminium covered way links up the extension with the existing main building, which is in traditional construction. When the new colony is complete the present main building and aluminium extension may be used as an annexe for children or older patients.

Contractors for the supply and erection of the aluminium superstructure were Short Bros. Ltd., and Harland Ltd., Belfast, agents for "Bristol" permanent aluminium buildings in Northern Ireland. The general contractor was Henry Laverty & Sons Ltd., of Belfast.

*Forecourt to patients' block*



# Information Digest

## OFFICIAL PUBLICATIONS

- **British Standard Codes of Practice.** Issued by British Standard Institution, 24 28, Victoria Street, S.W.1.
- British Standard Code of Practice CP.231:1952.** Painting. Price 10 - post free.

The Council for Codes of Practice for Buildings has now issued in final form Code 231, "Painting." It was drawn up by a Committee convened on behalf of the Council by the Royal Institute of British Architects, and the present code is a revision of drafts previously issued for comment. The Code relates to the painting of buildings for the purpose of decoration, protection or hygiene, and includes a head code dealing with general considerations and sub-codes on particular aspects of painting wood; building boards, sheets and slabs; iron and steel; non-ferrous metals; plaster, concrete, brick and stone; lime plaster; calcium sulphate plasters; Portland cement concrete, plastering and rendering; brickwork; and stone masonry. A comprehensive list of definitions of terms relating to materials and a fully descriptive schedule of paint types is included. The Code deals with all important points in the processes involved and gives recommendations on the selection of paints for different situations and materials, on the preparation of surfaces, application of primers, undercoats and finishing coats. The causes of some common defects in finished work are set out and recommendations made for avoiding their occurrence. Various appendices to the Code complete a document which should prove of great value to the profession and trade.

**Draft British Standard Code of Practice. CP.304 : 1952.**  
Soil and Waste pipes above ground. Price 5 - post free.

The Council for Codes of Practice for Buildings has now issued for comment Code 304, "Soil and Waste Pipes Above Ground," together with three sub-codes, all of which have been prepared for the Council by a Committee convened by the Institution of Municipal Engineers. These deal with the design and installation of soil, waste and ventilating pipes where they occur above ground, both inside and outside a building. Rainwater pipes are excluded. Stress is laid on the importance of consultation at the planning stage between all the interested parties, and lists of British Standards are included to which materials, appliances and components should conform. The Code describes in some detail the systems which may be used, and makes recommendations on the layout of pipework and appliances, on suitable fixings for various types of pipes, on traps and ventilating pipes, on the most likely points at which obstructions may occur and on methods of ensuring easy access at these points. General information is given on various methods of jointing pipes of different materials, and suitable methods of fixing. There are notes on testing soil and waste systems for watertightness, for hydraulic performance and for the stability of trap seals. Advice is also included on the maintenance of pipework, fittings and fixings. Drawings show pipe sockets, lead tacks and other fixings, also access caps and covers of various types. Tables give rates of discharge for sanitary appliances in terms of flow units. Recommendations are made for pipe sizes for soil and waste pipes and suspended drains.

**Draft British Standard Code of Practice CP.151.101 : 1951.**  
Wooden Doors. Price 5 - post free.

The Council for Codes of Practice for Buildings has now issued for comment Code 151.101, "Wooden Doors," prepared for the Council by a Committee convened by the Incorporated Association of Architects and Surveyors. This Code deals with wooden doors of all types for normal purposes, their frames and linings, and the different methods employed in hanging doors and fixing frames and linings. A comprehensive list of definitions is included and advice is given on the choice, sizes, weights and quality of timbers, on adhesives, preservatives, etc. Recommendations are made regarding durability, fire resistance and spread of flame, thermal insulation, sound insulation and pest infestation. The Code mentions the various types of doors and their

different manners of opening. Guidance is given on economy, strength, rigidity and dimensional stability. The work to be done off and on site is described and there are also recommendations on inspection, testing and maintenance; fifteen diagrams are included illustrating the text.

**British Standard 1811 : 1952.** Methods of Test for wood chip boards, wood waste boards and similar boards. Price 2 - post free.

In view of the fact that during recent years processes have developed for the manufacture of boards for building purposes from particles of wood or similar materials, it has been agreed between the manufacturers and users that the methods of test applied to such boards should be standardized. This British Standard has been prepared in response to this demand. No limits are prescribed for the various properties, but the preparation of a quality standard is under consideration. In the meantime, where a board is required for a particular purpose, it will be up to the manufacturer and user to select appropriate tests and agree on the level of quality to be maintained. This standard includes tests for the more important characteristics and discussion is continuing with a view to extending the range of tests as soon as sufficient information is available on which standard methods can be based. The Standard specifies a series of methods of test for boards consisting mainly of particles of wood waste or other similar materials bonded with a synthetic resin or other organic binder. The Standard is illustrated by diagrams and photographs.

**British Standard 699 : 1951.** Copper Cylinders for Domestic Purposes. Price 2 6 post free.

This British Standard was first published in 1936 and revised in 1944. The publication under review is the second revision in which consideration has been given to sizes now demanded as a result of post-war conditions. Amendments have been made in order to meet these requirements by the addition of three new sizes in the ranges of cylinders. The opportunity has been taken to bring the clauses and the layout of the Standard as far as possible in line with the recently issued British Standard for Indirect Cylinders, in order that four standards covering water storage facilities for domestic use may form a series to which others may be added in due course. The standard specifies requirements for copper cylinders in three grades and ten sizes. The cylinders are primarily intended for fixing in a vertical position. A table of dimensions and capacities of cylinders is included together with an appendix on alternative methods for fixing circulators or immersion heaters.

**British Standard 855 : 1952.** Welded steel boilers for hot water, central heating and hot water supply. Price 6 - post free.

This revised British Standard supersedes B.S.855.1939, and is divided into two parts. The first deals with such matters as fuels, heating surface, dampers and doors, provision for emptying, marking and materials, etc., and the second part covers the method of testing boilers for the determination of the water heating efficiency at their rating. The Standard applies primarily to hot water, central heating and hot water supply welded steel boilers of over 5 sq ft heating surface for operation on systems vented to atmosphere and operating at pressures not exceeding 150 ft head (65 lb/sq in) and at temperatures not exceeding 212 degrees F. The appendices of the Standard include information to be supplied by the purchaser with enquiry or order, information to be supplied by the manufacturers, and typical methods of attachment for standpipes, pads, and bosses secured by welding alone.

**Addendum No. 1 January, 1952 to British Standard 1161 : 1951.** Aluminium and aluminium alloy sections. Price unstated.

These notes are intended to be used in conjunction with British Standard 1161, to assist users in the selection of

aluminium sections for various purposes, and outlines the characteristics of the different aluminium alloys available in the form of extruded sections. A number of useful tables are included in the addendum.

**National Building Studies. Special Report No. 16.** The Corrosion of Steel in Steel Houses. Issued by Her Majesty's Stationery Office, York House, Kingsway, W.C.2. Price 1/9.

This report by the Building Research Station of a limited survey of steel-framed houses built between 1920 and 1927 was undertaken to obtain information on the efficiency of the protective coatings applied to the houses when they were erected. The work was carried out jointly by the Building Research Station, the Chemical Research Laboratory, the Research Association of British Paint, Colour and Varnish Manufacturers, and the Chief Scientific Adviser's Division of the Ministry of Works. Some sixty houses of eight different types of construction were examined in various parts of the country. The steelwork in many of the houses had received no maintenance (apart from the painting of exposed surfaces) since their erection. The investigation covered the study of details of design likely to permit the penetration of moisture, the effectiveness of protective coverings, the effect of mechanical damage, the extent of atmospheric pollution and other possible causes of corrosion. In one case a rockery built to a height of 18 inches against the steel cladding of the house caused serious corrosion. The report concludes that two coats of paint will provide adequate protection in wall cavities unless faults of design permit rain to penetrate into the cavities. Little condensation was found in cavities, but in buildings with internal linings of high thermal resistance special care should be taken in protecting steelwork. Faults in design leading to corrosion included: steel stanchions erected in contact with wet clinker concrete without previous protection of the metal and the omission of watertight jointing between sheets of cladding. The report emphasizes the importance of watertight window frames, regular painting and the avoidance of water traps at the base of the cladding. In the absence of attention to these points serious corrosion is likely to take place.

- **Building Research Station Film List January, 1952.** Issued by the Department of Scientific and Industrial Research. Free.

This list gives details of 11 films available on loan, free of charge, from the Building Research Station. All films are 16mm and the list covers a wide range of subjects from external rendered finishes to research and modern housing. The list gives a brief description of each film, most of which are sound, and details of running time. It should be noted that at least a fortnight's notice is desirable to the Building Research Station when borrowing these films; they should be of considerable interest to schools of architecture and building.

- **Building Research Station Digest No. 36.** Painting Asbestos Cement. Issued by the Building Research Station, Garston, Watford, Herts. Price 3d.

This digest is the result of numerous enquiries for advice on the best method of painting asbestos cement products. The digest outlines the various factors causing difficulties for painting such materials, lists the various precautions to be taken, and gives a detailed analysis of the various materials suitable for use on asbestos cement. The question of choice of decoration, surface preparation and other preliminary work, back painting and maintenance are all considered.

**Building Research Digest No. 39.** Aluminium and Aluminium Alloys in Building. Part 1. Price 3d.

This digest describes generally the various grades of aluminium and aluminium alloys available for building components, and discusses the properties which determine their suitability for different purposes. The metals are also considered more particularly from the point of view of their durability under various conditions of service. The uses

of aluminium and its alloys will be described in Digest No. 40 in due course.

- **Failures of Wall and Floor Tiling.** By E. H. Waters. Published by The Division of Building Research of the Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia.

This report deals with the failures of wall and floor tiling, their causes and prevention. It considers the effects of expansion and contraction in considerable detail dealing with initial shrinkage, changes in temperature, structural movement, etc., and suggests structural details which minimize the effect of compressive stresses. The influence of the tile/mortar bond in tiling failures is also considered, the causes being such faults as insufficient soaking, rapid drying, frost, lack of cleanliness, and the use of unsuitable mortar, etc. Miscellaneous failures are listed, such as crazing, the failure of bond between bed and background and blowing. Although the paper generally assumes that tiles are laid in the traditional manner by bedding in mortar, the American method of setting wall and floor tiles in mastic or special adhesives is considered and briefly discussed. The report concludes with a number of recommendations which should be of considerable help in reducing failures in tiling.

**The Coefficient of Solar Absorptivity and Low Temperature Emissivity of Various Materials.** By T. S. Holden and J. J. Greenland. Published by the Division of Building Research of the Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia.

This publication is a review of the literature on this subject together with tables of solar absorptivity of various materials and a table of low temperature emissivity of various materials. The long list of references concludes the report.

#### PROFESSIONAL AND TRADE ASSOCIATION PUBLICATIONS

- **A Complete Guide to the Building (Safety, Health and Welfare) Regulations.** Published by the Royal Society for the Prevention of Accidents, 52, Grosvenor Gardens, London, S.W.1. Telephone : Sloane 2246. Price 15/- post free.

This Guide is strongly recommended as a standard work for ready reference to all concerned with building construction, not only those actively engaged on the actual building task but architects, engineers, and others concerned first with design and later with supervision or consultancy. The book should be especially useful to the safety advisors who now have to be appointed under the Regulations. Statutory Instrument No. 1145 applies to building operations undertaken by way of trade or business for the purpose of any industrial or commercial undertaking, or by or on behalf of the Crown or any municipal or other public authority. The Regulations have what is possibly the widest application in industry generally of any made under the Factories Act and this book is a successful attempt to provide a simple but complete guide for those whose duty it is to comply with the Regulations. The authors have grouped the relevant requirements under appropriate headings, and have compiled a most comprehensive index. The main sections of the Guide covered are dates of operation; regulations revoked; definitions of terms; application of the Regulations and Factories Acts; obligations under the Regulations; appointments and personnel; examination, test and records; notices, signs or marks; first aid; welfare and personal safety appliances; scaffolds, working places and access; excavation; demolition of buildings; chains, ropes and lifting gear; lifting appliances; hoists; machinery; and general precautions.

- **Club Premises for Old People.** Published by the National Corporation for the Care of Old People. 33, Doughty Street, London, W.C.1. Telephone : Terminus 2258. Free.

This little pamphlet has been prepared for the use of committees dealing with the design and construction of new buildings as club premises for old people. It covers the main factors involved, including choosing a site, general planning of the building, finance, technical considerations on design and construction and official requirements. The publication should be of considerable help to committees

as the material it embodies is the result of many years of experience in this sort of work by the National Corporation. It is important that sponsors of such schemes should obtain copies of publication at the earliest possible stage to avoid difficulties that arise when many of these points are ignored. The recommendation is made that in all cases a qualified person should be brought in to advise on such buildings, and information is given concerning ways and means of obtaining grants, either in the form of capital assistance or maintenance grants.

- **Educational Films Connected with Plumbing.** Issued by the London and Home Counties Regional Advisory Council for Higher Technological Education, Tavistock House, Tavistock Sq., London, W.C.1. List No. 10. 1952. Price 2 6.

This list of films has been published in collaboration with Scientific Film Association and details 56 films available for hire. The list is comprehensive and critical in that it gives a summary of the contents of each film with an appraisal of its merits and indicates its suitability for various types of education. The catalogue should be of considerable interest to schools of building and technical schools.

- **You and Your Industry.** Published by Furniture Development Council, 11, Adelphi Terrace, London, W.C.2. Price 3 6.

This booklet, which is sponsored and produced by the Furniture Development Council, was designed by the Bureau of Current Affairs in collaboration with Dennis Young, A.R.C.A., and is in the form of an illustrated questionnaire for young members of the furniture industry. The booklet gives an outline of the history of furniture making, the materials used, tools and machines employed, and the factors governing design. Throughout the publication spaces are left for the reader to answer various questions giving his comments and views on illustrations and other matters, and, in addition, a packet of cut-out gummed pictures are included which can be stuck in the book in the appropriate spaces when the questions are being answered. It is suggested that when the copy of "You and Your Industry" is completed, it should be sent to the Furniture Development Council with an application for further information in relation to training and advice. The object of the book is to teach newcomers to the furniture industry about its past and its future.

- **A Record of the First Annual Convention of the British Wood Preservation Association.** Issued by the British Wood Preservation Association, 21, College Hill, London, E.C.4. Price unstated.

This publication is a record of the British Wood Preservation Association's first Annual Convention held in Cambridge during 1951, and includes some 14 papers given at the conference on a wide variety of subjects relating to the preservation of timber, together with a summary of the discussions and a list of delegates and visitors. The Association was founded in 1930 and after the war renewed its activities in 1949, since when it has produced many leaflets on the different aspects of timber preservation, and it hopes to produce a handbook on the same subject as soon as possible.

- **The British Journal of Industrial Safety No. 18 1951.** Published by The Royal Society for the Prevention of Accidents, Editorial Office, 131, Sloane Street, London, S.W.1. Telephone: Sloane 7261. Price unstated.

The 1951 Winter edition of the British Journal of Industrial Safety includes a number of articles of interest, in particular the article by C. A. Oakley on the Prevention of Factory Accidents.

- **Building a Petroleum-Chemicals Plant.** Issued by Petrocarbon Limited, 44A, Dover Street, London, W.1. Regent 7602 3. Free.

This publication contains three papers on the subject of the new Petrocarbon Plant at Manchester dealing with (1) Some Engineering Aspects, by H. E. Charlton. (2) The Fuel, Heat and Power Aspects, by E. Bonwitt. (3) Chemical Engineering Aspects, by H. E. Charlton. The papers describe in great detail the various problems of building a plant for the production of chemicals from petroleum, and the text is very fully illustrated with plans and photographs.

Architects will be particularly interested in the orderly and attractive layout of the plant, and the simple and effective design of the buildings, for which the architects were Messrs. Scherrer and Hicks. All concerned with this giant plant are to be congratulated on achieving not only an efficient installation but one which makes a pleasing group of buildings and equipment. In so many instances developments of this sort are unplanned and untidy, and it is a pleasure, therefore, to find a progressive industrial company who have appreciated the value of close co-operation between engineers and architects.

- **International Lighting Review.** Issued by Philips Electrical Ltd., Century House, Shaftesbury Ave., W.C.2. Free.

This is the first of the 1951-52 editions of *Lighting Review*, and includes a long article on lighting for textile exhibitions, a report of the 12th session of the International Commission on Illumination, held in Stockholm in 1951, and details of the lighting of the Cine Rio at Sao Paulo. As usual, this publication is very fully illustrated with excellent photographs, including series taken by well-known photographers to indicate the importance of light in making good photographs. A review is included of the new Saxone Shoe Shop in London and a number of photographs are included with a short article on floodlighting in Bruges.

- **Secrets of a Good Canteen.** Issued by Intel (Caterers) Ltd., 2, Parkshot, Richmond, Surrey. Telephone Richmond 2288 9. Free.

This little brochure outlines the important points in running a good canteen, and suggests ways in which the publishers can give assistance in achieving a canteen which fulfils all that is required of it by yielding a reasonable return for the capital invested, contributes to the health, happiness and efficiency of the employees and gives the catering staff the satisfaction that comes from the knowledge of a job well done.

- **Dexion News, Volume I, No. 12.** Issued by Dexion Limited, 189, Regent Street, London, W.1. Telephone Regent 4841 5. Free.

This brochure describes in detail the materials made by Dexion, Ltd., which consist of a slotted metal section which can be used for a variety of purposes in "Meccano-like" fashion. The illustrations show the materials used for a variety of purposes, including storage racks, conveyor-belt supports, frameworks for patent glazing, benches and counters, and many other similar uses, including partitions and trolleys. The Dexion material includes the aluminium or steel angle in 10in lengths, flat panels for shelving or table-tops, hinges where doors need to be formed and castors for trolleys. The company also make a special cutter for cutting the angle into lengths as required.

- **Nuralite.** Issued by Henry Honess & Son, 39, Windmill Street, Gravesend. Telephone Gravesend 1714. Free.

At the present moment the supply of light copper, and zinc for roofing and flashings, is inadequate, and if reports are correct the supply position is likely to deteriorate during the coming year. This pamphlet describes a new material manufactured by Cellacite and British Nuralite, Ltd., and distributed by Henry Honess & Son. The new material is based on bitumen and asbestos and forms a flashing material which can be used in the same way as zinc or lead for a wide variety of jobs on the average building. The sheets of Nuralite are 8ft by 3ft, with a weight of about 8 lb a sq ft, and when compared with zinc on a supplied and laid basis at to-day's prices Nuralite is approximately half the cost. The photographs in the publication show that this new material is easily worked and can be used for flashings, gutters, dormers, and in almost any position where copper zinc or lead would normally be used. The material is a mottled black in colour which wears in time to a light grey. The technique of laying and working is similar to that used with metal, and has the added advantage of the fact that sheets of Nuralite can be welded together in a simple manner. With the acute shortage of metal in the building industry this material would appear to have very great possibilities, and it is understood that supplies are plentiful and that no licences or permits are required.

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**THREE-STOREY FLATS: DRAINAGE ABOVE GROUND**  
Experiments made by the Birmingham School of Architecture

THE following test may be of interest in connection with the drainage of a three storey flats project being designed by fourth year students of the Birmingham School of Architecture. The one-pipe system of drainage is used and it was felt that it would be useful if tests could be carried out to determine the real value and necessity of the conventional waste and soil branch ventilation pipes.

Messrs. Econa Modern Products, Ltd. of Birmingham were approached, and they pointed out that they had manufactured the traps and pre-formed the waste, soil, branch ventilating and anti-siphon pipes for the Wolverhampton Corporation's flats at Warstones Drive and that these flats had not yet been handed over for occupation.

The fittings in each of these flats

consist of bath and wash basin, separate w.c., and sink in the kitchen. The waste and branch ventilating pipes are conventional.

One completed section of flats, three storeys high, was made available for testing through the kindness of the Wolverhampton Borough Engineer, Mr. Mervyn Law, and the architect, Mr. Chapman.

Econa's preforming method allows

TESTS CARRIED OUT ON A "ONE-PIPE" SYSTEM OF PLUMBING

[illegible]

FIRST FLOOR BRANCH VENTS RENDERED INEFFECTUAL

4	All fixtures plugged on the ground floor					D	D	D	D	D	D	D	D
5	All fixtures plugged on the ground floor All fixtures unplugged on the first floor					0	0	0	0	D	D	D	D
6	All fixtures plugged on ground floor. Six pieces of newspaper in 2nd floor W.C. Map used in flushing					0	0	1	0	D	D	D	D
7	All fixtures plugged on ground floor. All fixtures unplugged on the 1st floor. 2nd floor bath overflowing					0	0	0	0	D	D	D	D
8	2nd and ground floor baths overflowing. (Packet of sandwiches in ground floor W.C. not flushed away)	D	D	D	D	0	0	0	0	D	D	D	D
9	2nd and ground floor baths overflowing	D	D	D	D	0	0	0	0	D	D	D	D
10	Bucket of water flushed in 2nd and ground floor W.C.s at peak of discharge	D	D	D	D	0	0	1	0	D	D	D	D

## GROUND AND FIRST FLOOR VENTS RENDERED INEFFECTUAL

11	No paper used in W.C.s	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D	D	D	D
12	No paper used in W.C.s	D 0"	D 1"	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D	D	D	D
13	No paper used in W.C.	0"	0"	0"	0"	0"	0"	0"	0"	D	D	D	E
14	Ground floor discharges 5 seconds before 2nd floor fittings. 1st floor fittings plugged	D 0"	D 0"	D 0"	D 0"	0"	0"	0"	0"	D	D	D	D
15	Ground floor discharges 5 seconds before 2nd floor fittings. 1st floor fittings unplugged	D 0"	D 0"	D 0"	D 0"	0"	0"	0"	0"	D	D	D	D
16	No paper used in W.C.s	0"	0"	D 0"	0"	0"	0"	D 0"	0"				D
17	W.C.s flushed by bucket at peak of discharge. No paper used	0"	0"	0"	0"	0"	0"	D 0"	0"				D
18	W.C.s flushed by bucket at peak of discharge. Paper used	0"	0"	blow back	0"	0"	1 1/2"	D 0"	0"				D
19	W.C.s flushed by bucket at peak of discharge. Paper used	0"	0"	blow back	0"	0"	1 1/2"	D 0"	0"				D
20	W.C.s flushed by bucket at peak of discharge. No paper used	0"	0"	blow back	0"	0"	1 1/2"	D 0"	0"				D
21	No paper used	0"	0"	0"	0"	0"	0"	D 0"	0"				D
22	Flushing in 1 second intervals in order—2nd, 1st, Ground floor	0"	0"	D 0"	0"	0"	0"	D 0"	0"				D
23	Fittings discharged in order of floors at 1 second intervals 2nd, 1st, Ground floor	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D 0"	D	D	D	D
24	Vent STACK BLOCKED above roof level	0"	0"	0"	0"	D 0"	4"	D 1"	D 4"	D	D	D	D
25	Vent STACK BLOCKED above roof level First floor basin unplugged	0"	1 1/2"	0"	0"	D 0"	1 1/2"	D 2 1/2"	D 1"	D	D	D	D

for easy removal of any fitting or pipe in the system, so they were able to supply and fit traps made of glass which were otherwise exact replicas of the deep seal tubular traps they had supplied on the job, and it was possible to observe in these glass traps not only the eventual loss of seal but also the fluctuations which took place in the water level under different circumstances.

Time didn't permit more than 25 tests being made and it is appreciated that these tests would only be conclusive if each was repeated ten times and the worst of the ten results recorded. However, the detailed results of the 25 tests are summarized in the tables on p. 441 and are very interesting.

The first three tests were carried out mainly to ensure that the installation, which had not been in use for some time, was in good working order. The first two tests, in fact, showed that the rather long sanitary branch on the first floor was obstructed and the third test is the result which was obtained when the obstruction was removed. Tests four to ten were made after the branch ventilation pipes on the first floor had been removed and the vent connections capped. Test No. 7 is a repeat of test No. 6 because it was discovered that an over-enthusiastic participant on the second floor unnecessarily helped the six pieces of newspaper down the w.c. with a very large floor mop.

For the remainder of the tests, observations were made on the traps on the ground floor as well and, here again, the branch vent pipes were made ineffective.

Tests 24 and 25, with the top of the soil pipe plugged were expected to show big seal losses if the system was air-tight as it proved to be.

Apart from these last abnormal tests, the only seal losses, with all ground and first floor vent pipes made ineffective, took place when buckets of water were discharged into the first and second floor W.C.'s at the peak of the flush and in only one case (No. 18) did the amount of seal loss exceed that which is allowable in the opinion of the Building Research Station.\* The Sanitary branch is 3/4 in diameter copper, 5 ft long, placed at a fall of 5; the "P" trap under the basin has a fall of 1 1/2 through a distance of 2 ft 6 in to the soil and waste stack. Under the sink there is a 1 1/2 in "S" trap discharging into a 1 1/2 in waste pipe with a similar seal. From the bath, there is a 1 1/2 in "Econa" running trap discharging at 10 into the soil stack.

In all the tests, the overflow of the basin was plugged and the basin filled to overflow level. The sink contained 3 in of water and, except in the instances named, the bath contained 3 in of water.

It would be pleasant to be able to conclude from these tests that the omission of branch ventilation piping is possible. But, at least so far as the W.C. pedestals are concerned on the first and the ground floor, it is felt that

\* See Paper by Wise—January Journal of The Institution of Sanitary Engineers.

such an omission might be undesirable, if only because test No. 10 might be representative.

It certainly seems from these tests that it would be worth while, before spending a great deal of money in fitting orthodox branch ventilation to bath, basin and sink wastes, to investigate further the real advantages to be gained, if any, by doing so.

## R.I.B.A. PRIZES AND STUDENTSHIPS 1952-53

THIS year's pamphlet dealing with the R.I.B.A. prizes and studentships has been printed and is available from the R.I.B.A.—price 2s 6d, post 3d.

There is a new prize offered—a new prize in name at least—the R.I.B.A. Intermediate Design Prize. This is offered in alternate years to the Tate and a certificate and the sum of £100 is offered for the study of contemporary architecture in Europe.

There are no restrictions regarding the style of design which competitors may submit. You must not have passed the Final R.I.B.A.; otherwise there appears to be no restriction in age.

I feel there is one point which may not have been appreciated by the Board and that is the fact that the last day for submitting forms of application was March 20. The pamphlet has only just been available. Unless, therefore, you were at a school which had received the pamphlet you might not discover the prize until too late.

The Senior Design Prize this year is the Victory Scholarship, which carried with it a silver medal and the sum of £120. The successful competitor is required to utilize the money for the advancement of his professional education.

The last day for applications for admission was March 24.

The design again is not restricted to any particular style of architecture. Let us hope there will be a better appreciation of architectural design put forward for the consideration of the Jury than last year's Soane competitions.

For those interested in Measured Drawings, there is the R.I.B.A. Silver Medal and the sum of £75. There is no age limit and no stipulation as to being a member of the R.I.B.A. It has been the practice to submit measured drawings of Renaissance subjects but there is no reason, as far as I can read in the conditions, why Gothic subjects should not be submitted.

There is also for competition this year the Neale Bursary and a sum of £100. This is awarded, so it states in the heading to the page, "for the Measurement of Old Buildings." This is rather misleading, for in the text to the prize it states that it will be awarded to any British subject who shall submit the best selection of drawings, and sketches and/or other

evidence of research in the field of historical architecture."

This wording gives a wider and more interesting scope than merely for measured drawings.

The Arthur Cates prize, which carries with it the sum of £80, is offered this year "for a study of the contemporary development of Domes, to take the form of a critical essay which must be illustrated." Let us hope that this subject, which has great scope, will attract more entries than is usual for this prize.

For those interested in colour, there is the Owen Jones Studentship and the sum of £100. This studentship has attracted a higher standard of late. It is hoped the standard will be maintained.

The oldest of the R.I.B.A. prizes, the Silver Medal for an essay and the sum of £50, is for the best essay on a subject of architectural essay. Do not forget to get your title and a brief description of the proposed scope and treatment of your subject approved by the Jury—it must be submitted before September 5. Do not over-illustrate your essay; this can be fatal.

The Hunt Bursary and the sum of £75 is offered for the study of Housing and Town Planning. You must be under 30 years of age and have passed your Final.

The subject for this year's Bannister Fletcher Silver Medal for an essay and the sum of 25 guineas is one which makes me wish I was still at the Inter stage. It is "Farm Buildings of any County or District before 1837." The length has been extended to 5,000 words. This should give literary-minded students ample scope on this interesting subject.

In addition, there are the Alfred Bossom Research Fellowship; Dawney Scholarships; Rome Scholarship; Silver Medal for students of recognized schools of architecture; and prizes for public and secondary school pupils.

Before entering for any prize you would be well advised to study the conditions carefully. M. E. T.

## Dundee Housing Scheme

Dundee Housing Committee have approved tenders to the value of £919,601 for 512 houses on their Douglas and Angus estate. The total cost, when the cost of the land, the site works and professional services have been included, will amount to approximately one million pounds.

There are three firms sharing the contracts: John Lawrence (Glasgow), Ltd., 178 houses, £328,480; The Scottish Orbit Co., Ltd., 196 houses, £348,690; George Wimpey and Co., Ltd., 138 houses, £242,431.

The costs per house range from: £1,541 for a 3-apartment tenement to £1,922 for a 4-apartment cottage.

The contracts are the biggest ever entered into by the corporation for a single development on a housing estate.

# County Architect beats Shortages



## VERSATILE NEW MATERIAL SOLVES FLOORING PROBLEM

One of the most urgent tasks confronting public authorities in the post-war years has been the provision of new school accommodation. In the West Riding of Yorkshire, population rise has so far outstripped the regular building programme that an emergency scheme has been put into operation for enlarging the present schools. Sixty annexes of standard design (see illustration) are being built in the grounds of existing schools, mostly comprising two classrooms, cloakroom and sanitary accommodation, in order to meet the emergency.

Owing to the urgency of the work, only readily available materials could be specified. At the same time, the budget would not permit luxuries.

### Choosing a floor

One problem of great importance has been flooring. A floor had to be found that was at once durable, readily available, and not too expensive.

The material chosen by Mr. Hubert Bennett, F.R.I.B.A., the county architect, was "Accotile," the asphalt tile flooring made by the Armstrong Cork Company—firstly, because it is readily obtainable, and secondly, because Accotile, with its damp-resisting qualities, can be laid direct on to screeded concrete without the necessity of a damp-course—hence the installation is much lower in cost than for most floors.

Accotile provides the flooring for the classrooms and vestibules of every building in the Hengist Scheme.

### Qualities of Accotile

Accotile is a composition of inert, asbestos fibres and ground rock fillers, fadeless mineral pigment and asphalt or resin-binders. It pro-

vides an extremely durable floor floors laid in this country in 1938 and 1939 are still giving excellent service; that has a strong resistance to alkaline moisture. Accotile remains non-slip under all conditions, which makes it particularly suitable for schools and institutions.

There are almost unlimited possibilities of design for Accotile, and it can be laid to harmonize with existing decorations. Inconvenience is cut down to a minimum, since Accotile can be used as soon as it is laid.

Standard Accotile is cleaned by washing with

## THE HENGIST SCHEME

for providing additional school accommodation in the West Riding has involved a rush building programme; all materials used had to be readily available. Accotile, specified by Mr. Hubert Bennett, F.R.I.B.A., West Riding County Architect, for flooring the sixty buildings in the scheme, was chosen primarily because it was readily available, and because for special reasons (see below) the cost of installation was remarkably low—but it has proved more successful than old-fashioned alternatives. Picture shows the Hengist annex at Mansel Crescent Infants' School, Parson's Cross, Sheffield.



water, and can be polished when desired. It is resistant to stains and dilute acids. Where conditions make it advisable, a special Grease Resisting Accotile is recommended.

Accotile is available in two sizes of tile (12" x 12" and 9" x 9"); in two thicknesses (1 1/2" x 5/8"); and in 19 different colours. In addition, Accotile Coved Skirting, supplied in 36" lengths, obviates the need for timber; and, as there are no corners for dust to collect in, it provides a hygienic, as well as decorative, finish to the room.

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### FOR FURTHER INFORMATION

about Accotile, architects and builders are invited to write or telephone to  
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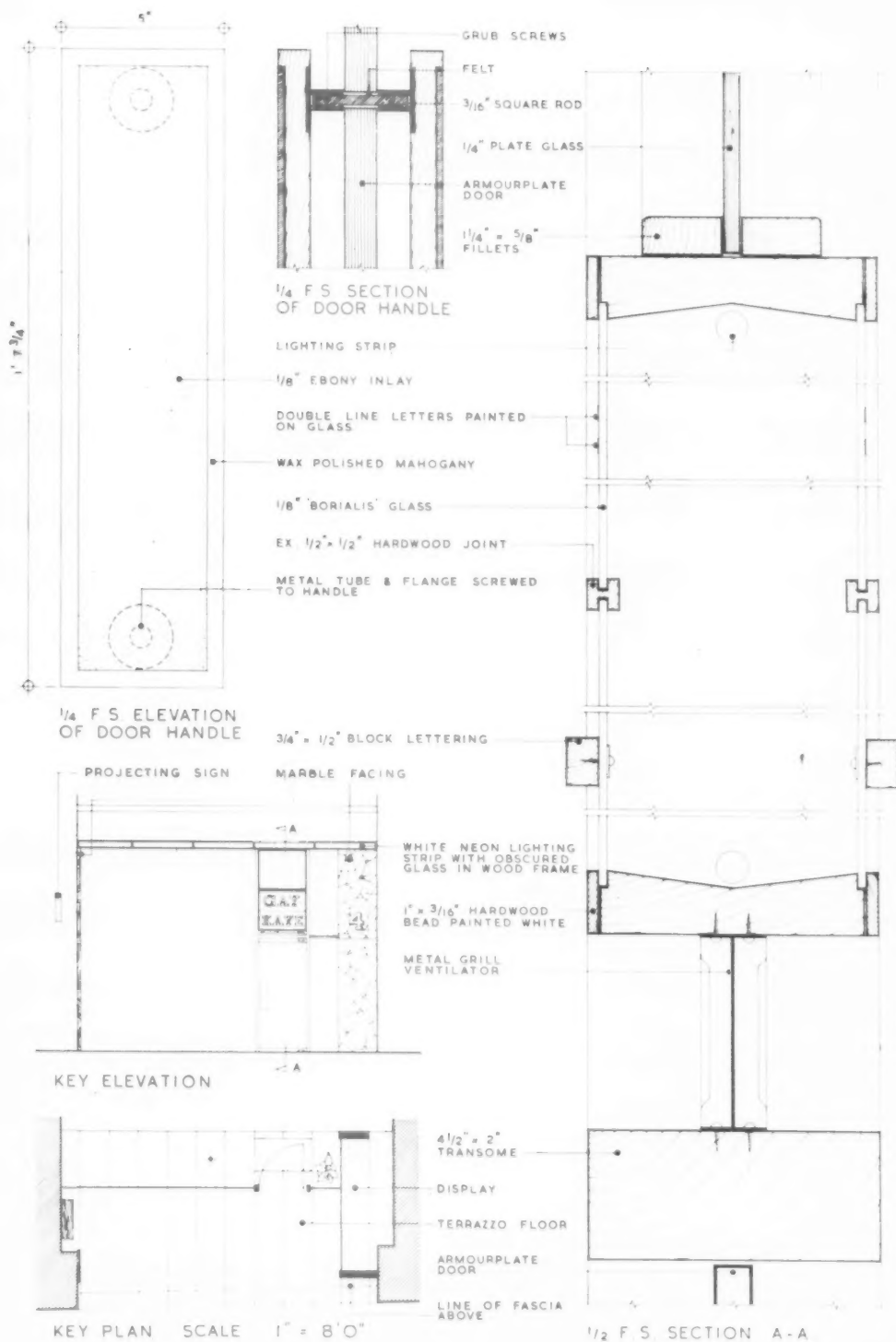
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## Reinforced Brickwork

AS cement is one of the scarce building materials I am not surprised to hear that some architects are turning their thoughts to reinforced brickwork as an alternative to reinforced concrete. There are no very great difficulties with this method of building except that some architects may be troubled by the need to prepare calculations to satisfy the local authority; most architects, other than the few specially knowledgeable ones, will no doubt overcome this problem by seeking the aid of their structural engineers to design and calculate their reinforcement. As for reinforced concrete, very careful supervision is necessary, especially in these days when bricklayers are not accustomed to grouting their brickwork, which is an essential in reinforced brickwork.

Good guidance on the design of reinforced brickwork was issued as B.S.1146 as long ago as 1943, although this method of construction does not seem to have been applied to any considerable extent. The B.S. was superseded by sub-code 111.102 which forms part of Code of Practice CP.111 "Structural Recommendations for Load Bearing Walls" (B.S.I., price 5s), issued in 1948. No great difference exists between the recommendations of these two documents but the code is more complete and has all the necessary references to the related codes and standards.

Incidentally, reinforced brickwork lintels are very applicable to normal brick construction of houses. They are easy to handle on the site and probably less costly; they do not involve hoisting heavy lintels nor do they need steel angles or flats as do brick "soldier" arches.

Reinforcement for reinforced brickwork can make use of small bars, or mesh fabric to B.S.1221, together with steel wire to B.S.785, which are similar to the reinforcement needed for reinforced concrete.

Most types of brick may be used for reinforced brickwork; the only ones to avoid are those with a compressive strength of less than 1,500 lb/sq in and any which have much soluble sulphate as this may cause expansion of the mortar and may attack the reinforcement. It is, however, important that there is no great variation in strength between the individual bricks in any job. The permissible design stresses vary with the compressive strength of the bricks, thus the higher strength types are advantageous; to establish the strength of bricks they should be examined in relation to B.S.1301 for clay engineering bricks, and tested by the methods in B.S.1257.

Care is needed to use the correct type of mortar as given in CP.111.102, namely, cement-lime mortar in the proportions by volume 1:4 to 1:3 max. The same type of mortar is needed for reinforced brick lintels regardless of

the type of mortar used for the rest of the brick facing. Care should also be taken in the selection of the lime to be used, as is specially mentioned in the code, and to avoid particularly magnesium lime with more than 5 per cent magnesium oxide. These cement-lime mortars demand careful supervision of their rapid use after the cement is introduced; the code suggests a maximum period of two hours when ordinary Portland cement is used but I would suggest this time should, if possible, be reduced for safety. The time needs to be reduced to a minimum if Rapid Hardening cement is used. High Alumina cement should not be used.

Vertical joints must be fully filled and this necessitates grouting to assure success; the grout must have the minimum of water so that it is just pourable, but grout must not be used for bedding bricks.

As bars have to be placed in the joints, narrow joints are impossible, which is a factor that must be taken into account, particularly when designing the "rise" of the courses. The cover of bars should never be less than  $\frac{1}{2}$  in thick and this will usually necessitate an allowance of  $\frac{1}{2}$  in for joints. The cover between bars and the face of a wall without finishes, such as plaster, has to be at least  $\frac{1}{2}$  in from interior faces, 2 in from exterior faces and 3 in from soil in foundations.

The code stresses the need to retain supports under soffits of beams and other members not initially self-supporting for specified periods depending on the type of cement used and on weather conditions. The amount of shuttering required for reinforced brickwork is both small and very simple in comparison with that needed for reinforced concrete; this is a major consideration in these days of timber difficulties.

Attention is also drawn to the necessity of ensuring that bricks are sufficiently wet before use but long soaking of bricks is deprecated. I do not think these remarks apply only to reinforced brickwork as, in my opinion, they are of equal importance in any brickwork except for the relatively few types of bricks which have very low water absorption. The modern custom on sites seems to be either to rely on the bricks having been adequately wetted by the last fall of rain, whenever that might have been, or to put them into water for very long periods; immersion for half a minute to a minute is adequate.

The need to submit calculations for reinforced brickwork in order to obtain local authority approval is no new development as it has always been essential for steelwork and reinforced concrete construction, but I am probably right in thinking that this is generally left by the architects to their structural engineers or even by some to the steel and reinforcement sup-

pliers. I am hoping that the new model byelaws, when we see them, will be drawn up so that they will set standards of requirements and leave the more clever of our designers the opportunity to meet the requirements how they will by submitting calculations for walls, floors, roofs and the like for approval. It may be that specific alternatives may also be needed in the byelaws for those who are unable or unwilling to calculate the most economic answer. If the byelaws are prepared on such a basis we may have both from time to time when we want to build in an area where the staff of the local authority does not include skilled structural engineers conversant with all the latest developments and with the possibilities of new structural methods; no doubt, however, given time, even the smallest and most backward of our local authorities will find ways to overcome these difficulties. Better byelaws will necessitate better administrators of byelaws. I am afraid that more than a few of the difficulties that have been heard of arising from byelaws have often resulted from faulty administration, as even the existing byelaws are not really as bad or as restrictive as some people would have us believe.

### DUTCH UNCLE

#### Regional Housing Production Board for North Midlands

The Housing Production Board for the North Midlands, comprising the counties of Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire, Rutland and part of Derbyshire, has now been set up. Its headquarters will be in Nottingham.

**Independent Chairman:** Mr. L. G. Clugston, Chairman of Clugston Cawood, Ltd. and Clugston Staveley, Ltd., Managing Director of Colville Clugston of Glasgow.

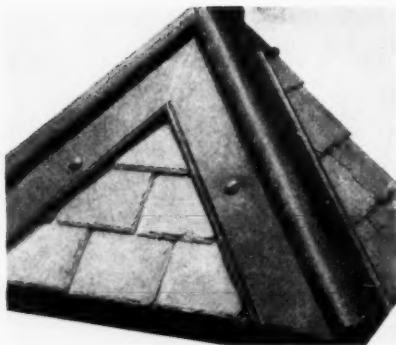
**Representatives of the Building Trades Employers:** Mr. A. Mason of A. Mason (Contractors), Ltd., Builders and Contractors, Mansfield. Mr. J. A. Tomlinson, Managing Director of Ford and Weston, Ltd., Building Contractors, Derby.

**Representatives of the Building Trades Operatives:** Councillor J. J. Grogan, J.P., Member of the National Executive of the National Association of Operative Plasterers. Councillor W. G. Rodgers, National Organizer, Plumbing Trades Union, Derby and District.

**Ministry of Housing and Local Government Representative:** Mr. P. St. B. Sydenham, C.B.E., Principal Regional Officer.

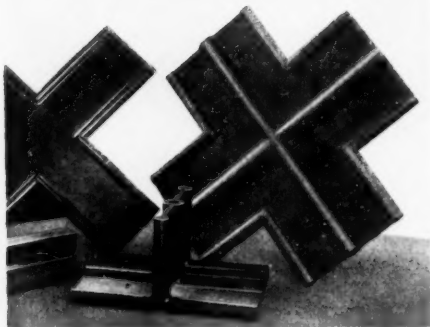
**Ministry of Labour and National Service:** Mr. G. E. Ball, O.B.E., Regional Controller.

**Ministry of Works:** Mr. W. T. Lewis, Regional Director.



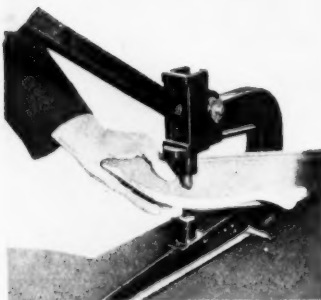
#### STRUCTURE FLASHINGS, ETC. A12

Although the material illustrated here is a substitute for hip and ridge tiles it is classified under flashings since the same basic material in different and thinner forms is also available as flat roofing and flashing. The base materials of these hip and ridge members are bitumen and asbestos blended to form a tough weatherproof covering. The colour is very dark grey suitable, as in this case, for use with slate roofs. There are obvious advantages about this material in view of the price of lead and other forms of metal flashing and cappings.



#### STRUCTURE JOINTING ETC. A52

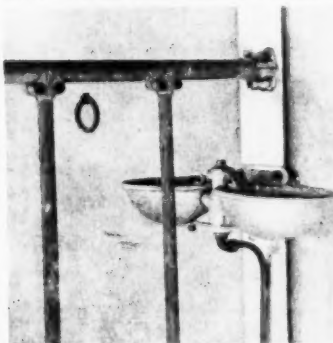
Made in a variety of sections to suit special requirements this solid rubber moisture-resisting jointing material has been used on several large civil engineering concrete structures where long life is of greater importance than cheap initial cost. The moulded sections ensure water-tight joints in concrete walls, retaining walls and flat concrete surfaces.



#### PLANT HAND TOOLS E318

A simple but accurate and effective tool for cutting pantiles. The framework is screwed down to any suitable horizontal surface and the tile is held in one hand. For large tiles the section of tile on the opposite side of the cutter from the operator's controlling hand can be rested on a support.

A gentle tapping movement of the chiselled hammer by means of raising and lowering the handle ensures a relatively regular edged cut of any outline. The finish of cut which can be achieved is shown in the illustration. Skilled operation is not essential to secure good results.



#### FITTINGS AGRICULTURAL C91

An automatic drinking bowl for cattle as fitted in Carmarthen's new cattle market which was opened recently.

The bowl is not only labour saving but ensures that tethered animals can get a drink merely by pushing their noses into the bowl thereby depressing the valve which releases the water to the bowl.

The model illustrated is the twin type bowl fed from a single pipe.

### MOSAICS

The names and addresses of manufacturers of any item illustrated in MOSAICS, together with more detailed information relating to their products—including price and availability—will be forwarded to readers on request.

Letters should quote the serial number and be addressed to:

The Editor,  
The Architect and Building News,  
Dorset House,  
Stamford Street, S.E.1.

Please mark the envelope MOSAICS.

### INDUSTRIAL NOTES

Fantom Finish is an emulsion paint just announced as on the market by Lewis Berger (Great Britain) Ltd. This new Bergermaster product is based on Styrene and the manufacturers claim that it may be brushed or sprayed on to almost every type of surface.

No shade card has yet been published but the colour range is as for the company's Satin Flat Oil Paint in thirteen shades.

The price of Fantom is 32s. 6d. per gallon. Sealer for porous surfaces costs 20s. per gallon.

Quick drying, ready for second coat in three to four hours, lack of lingering smell and resistance to scrubbing after a few days are amongst advantages claimed for the new emulsion.

A warning is issued that the paint should be protected against frost or excessive heat. Nor should the paint be applied to bare metal. Brushes are cleaned in water and cleaning down of splashes etc. is recommended as soon as possible.

Covering capacity of one gallon when mixed with water or sealer in accordance with the makers' directions is stated as 80-100 square yards.

On brick, plaster etc., the first coat should consist of equal parts of paint and sealer or if water is used 2 to 3 parts of paint to 1 part water. For the second coat 3 to 4 parts of paint to 1 of water are the correct quantities.

So heavy has been the demand from overseas buying houses and exporters in Britain for this year's advance editions of the British Industries Fair catalogue, listing over 2,000 manufacturers and the goods they have available for export, the Fair organizers have printed an extra 5,000 copies for sale at 3s. 6d. each, post free.

It has also been arranged for the first time, that final editions of the catalogue will be available in advance of the official opening of the B.I.F. on May 5. This is to enable visiting buyers to study the London or Birmingham volumes and to prepare their itinerary of the Fair buildings beforehand.

Overseas buyers, on production of their invitations or trade cards, will receive catalogues free from British Industries Fair, Finance Division, Lacon House, Theobalds Road, London, W.C.1.

The Plastics Division of E. K. Cole Ltd., claims to have solved the problem of producing a cistern float more economical and convenient in use than the conventional copper ball, yet which will have longer lasting properties and will not corrode.

Completely unaffected by continuous immersion in cold water and low-temperature conditions down to -36°C, the EKCO "Unimer" float, moulded in Polystyrene, will be produced in 4in. and 4½in. sizes. Buoyancy tests have proved that both are suitable for use in place of the next larger size copper float. Each float is pressure tested for leakage.

## Manchester Building Trades Exhibition

THE nineteenth Building Exhibition to be held in the City Hall, Manchester, was opened by Hugh Molson, Esq., M.P., Parliamentary Secretary to the Ministry of Works, on Tuesday, March 25. The Lord Mayor of Manchester, Councillor William Collingson, J.P., presided at the opening ceremony which was preceded by separate receptions: one for guests, the other for the Press.

Mr. Molson said:—

Labour is, of course, our first essential. I do not intend to say anything more upon that subject.

I think I can say something fairly cheerful about the supply of building materials. The Minister was able to say in the House of Commons ten days ago that in January 541 million bricks were produced, against 480 million in January, 1950, and 485 million in January, 1951. With regard to plasterboard the delivery period has been reduced from six months to immediate supply. Cement should be available in just sufficient quantities, but without anything to spare, especially if we stop the importation of cement from the Continent.

I am afraid the outlook regarding steel is quite different. With regard to building steel the position is bad and not at the moment improving. I beg architects, local authorities and industrialists to look to our ancient indigenous stone as a substitute for steel in as many cases as possible. We must also use reinforced concrete wherever possible and we have arranged with the Ministry of Supply for increased quantities of reinforcing rods to be rolled. I hope also that pre-stressed concrete will be increasingly used.

In this Exhibition you will see a stand illustrating the work which has been done in the Building Research Station. There is no doubt at all that our theoretical knowledge in this country is far ahead of our practice. We have reluctantly had to reduce expenditure upon publicity, but I do hope that everyone here interested in building will look at the Building Research Station's stall and will buy pamphlets on modern building technique published by Her Majesty's Stationery Office. We have a technical information officer specially assigned to the north-west of England whose duty it is to help in every way to make available to the industry the knowledge that exists.

I congratulate those who had the enterprise to establish this Exhibition about 40 years ago and who have carried it on during the difficult years since. In the building industry we seek to combine private enterprise with Government supervision and encouragement. I am here today in order to show the interest which the Ministry of Works takes in all aspects of the building industry. I wish the Exhibition every success.

The Exhibition is organized by Provincial Exhibitions Limited.

The success of any exhibition depends partly on the interest of the goods displayed and partly on the general atmosphere created. There is a natural and very understandable tendency for manufacturers who are launching new products to show such products either in London at the Building Exhibition or at Castle Bromwich, Birmingham, in the British Industries Fair. It is not fit therefore to

judge smaller exhibitions than those mentioned above on the strength of the "news" interest of exhibits.

Exhibitions in the provinces can, and sometimes do, give to a very large number of laymen, as well as members of the Building Industry, an opportunity of seeing for the first time building products which either are not on view to them in local merchants' establishments or which they do not seek out unless attractively displayed in an exhibition.

If these Exhibitions are to draw visitors in sufficient numbers to justify the financial outlay and staff time of the exhibitors something out of the ordinary is needed in providing the right atmosphere.

The Ministry of Works have had a marked degree of success in making their tented exhibitions a "draw." Gay colours,

protest to the general din. Give the exhibitor a chance, Manchester.

The general level of stand design is not high. Exhibitors justifiably content themselves with adequate and economical arrangements to display the goods. Stands therefore, such as that of the T.D.A.—already used at Olympia—have an advantage in attracting notice over those which are specially rigged for this exhibition.

Amongst exhibits which attracted notice were the following:—

Pallets and multiple bucket hooks for speeding up the hoisting and site transport of bricks, mortar, etc., were shown for the first time by **Ace Machinery, Ltd.** These devices have been under test for some time by Messrs. John Laing and are now on the market.

The brick pallet and transporter is a simple device. Bricks are stacked on a flat baseplate at the ends of which are projections which engage with locking pieces on a retaining cage. When the bricks are stacked the cage is dropped over the baseplate to enclose the bricks, the locking pieces automatically engage and the complete pallet is ready for hoisting on a scaffold winch or for transport on a specially designed light truck.

The multiple bucket hook will take three filled buckets at one hoisting. Both these devices were shown in this case in conjunction with the Ace scaffold hoist, the electric model of which was shown for the first time at Olympia last year.

Ornamental ironwork, a relatively new line from an old-established scaffolding firm was shown by Scaffolding (Great Britain), Ltd. Examples of their work on balcony railings can be seen on several blocks of flats in the London area, including the Lansbury site at Poplar. On the stand were examples of specially made wrought iron gates. Delivery for such special orders was quoted as six weeks from receipt of authorization.

Water emulsion paints are now catching on—if that is not too vulgar an expression. There is a natural tendency to be chary of new or relatively new products which have not been on the market long enough for "the other fellow" to use them first and so prove or disprove their worth.

There is no doubt that decorators are increasingly using this class of paints realizing the advantages they offer in application as well as finish and being willing to take a risk, if risk there be, on their long-term performance. Somewhere between the eager claims of paint salesmen and the cautious sales resistance of architects there lies a middle line and the writer's personal reaction is that these paints have a big future.

Smith & Walton, Ltd., are showing at Manchester their "Synflat" water emulsion paint. For those who are on the verge of trying something new the firm have produced a brochure entitled "The Answers to Many Questions." The first question is whether "Synflat" is more economical than water paint or flat oil paint. The answer given is in the affirmative since this class of paint reduces labour costs. Well—anything that does that these days gets away to a good start.

Elephants have not really got very much in common with building in this country. But as a publicity stunt an elephant is as good as a brass band for attracting the curious. In this particular instance "An elephant on the roof" as a slogan was good enough copy for the



**Ace Machinery: winch raising new duck pallet**

a considered layout and some attempt to introduce a little design into the entrances and to liven up the places of refreshment—where much business is done—are some methods which help to make visitors at home.

The exterior of the City Hall in Manchester has none of the necessary attraction in itself. But that something can be done to improve this state of affairs was shown when a false façade was erected during the Festival of Britain Travelling Exhibition.

Internally, too, a little extra thought could do much to improve the lot of exhibitors and visitors. On the opening day extraneous noise made appreciation of some exhibits difficult and belated hammering on stands made it impossible to conduct conversations with exhibitors.

The sound film is now an accepted and valuable means of dispensing information to visitors. On the D.S.I.R., B.R.S. stand—well designed and well laid out—there were, running concurrently, a sound film and a commentary on housing "progressing." In normal conditions both could have been appreciated. But both had to contend with music and announcements from an exhibition loud-speaker. The effect of all these together was to make at least one visitor move hastily to a quieter place, ignoring Mr. Molson's encouragement and adding a

*Manchester Evening News* and the Elephant quality Centulith wood wool slabs just marketed by Century Wallboards, Ltd., seem good copy for the A. & B.N.

The Elephant in question was used in a test of these slabs. Her name is Mary—the sweetest name I know (with apologies to the song writer) and she weighs—*or did while eating buns for the test*—2½ tons.

Speaking non-zoologically the test roof was built up of four slabs each 6ft x 2ft x 3in thick. Suspension was at 6ft centres. At one period of the test the slabs were subjected to a pressure of 6 tons per square foot without damage.

A feature of the new slab is that the wood wool is thicker than the depth of the edge supporting steel channels. Thus the joint on the upper side is wood wool to wood wool and prevents air to metal contact which is liable to result in condensation and consequent discoloration from the metal through any surface finish on the underside.

A new glass brick ventilating block with removable glass louvers is shown for the first time at this exhibition by Pilkington Brothers, Ltd. The block is attractive in appearance and should permit good ventilation through glass brick walls. The loose louvers it seems may be inclined to chatter slightly if set in walls exposed to wind. No doubt if this proves to be the case the makers will hastily remedy the matter by ensuring a closer fit than was noticed in the sample block exhibited.

J. Gerrard & Sons, Ltd., the contractors for the Free Trade Hall are back in the exhibition having deserted it for a time in the years when it closed its doors early. This firm are showing some fine examples of timber panelling and joinery and their contention that later closing hours give the general public a chance to see the goods is clearly a right one.

Interested in Planimeters? The latest addition to the range of integrating instruments shown, together with drawing and levelling instruments, by W. F. Stanley & Co., Ltd., is the Allright rule-form planimeter designed for the measurement of areas and mean heights of figures larger than can be covered by polar planimeters. In this design the measuring wheel travels on a uniform matt surface instead of on the drawing which is being measured.

Timber suspended ground floors are one of many features on the Timber Development Association Stand. The latest design sheets from the Association were available on the stand. These give designs for timber knee braced trusses and columns for single-storey buildings with sheeted roofs and either timber-clad or sheeted walls.

For builders a lightweight electrically operated short-bladed hand saw, shown on the stand of Arcow Engineers, Ltd., is worth notice. The saw is a Swiss invention produced by Scintilla, Ltd., of Soleure, Switzerland, and handled for the Building Trade in this country by the exhibitors.

The saw weighs 5.83lb and its design is such that it comfortably fits the hands. It will saw, either straight or to curved sections of short radius, wood up to 1½in thick, sheet metal up to ½in thick and sheet aluminium up to ½in thick.

Asbestos cement sheets can be sawn and samples on the stand indicated that

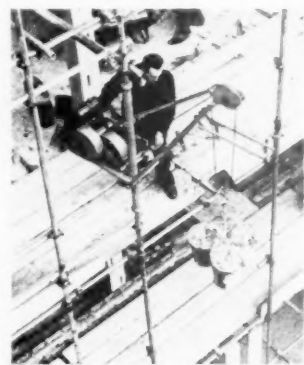
straight and curved cuts can be made in this material and in metals leaving very reasonably smooth edges which need a minimum of fining down, if any. Supplementary items in the kit comprise a neat wall support for the saw which incorporates a container for spare blades.

The saw has a stroke length of 1in and operates on direct or alternating voltages between 110V and 250V at 2,300 strokes per minute. A dovetailing attachment is available as an extra. The saw costs £32.

To many London architects, and others concerned with new building work only, dry rot and timber decay from insect attack may not be of such vital—note the word—interest as they are to those whose practice brings them in close contact with maintenance of churches and old houses.

The death-watch beetle goes on the wing this month, the furniture beetle flies in June whilst dry rot doesn't even bother to show itself sometimes as it eats away millions of pounds sterling.

Ely Cathedral, in the news lately with



**Ace Machinery: winch raising triple bucket hook loaded**

Chapman Pincher in at the kill, is only one example of the damage that can be done and of the money that is needed to rectify it.

At the Manchester Exhibition two specialist firms were available to advise on measures to be taken in combating attacks on timber.

Pestcure, Ltd., have applied for a patent in a new composition of Sodium Pento Chlorophosphate in which settlement is prevented by an activating ingredient which ensures constant full strength application. This is a development of some importance since Sodium Fluoride, successful on timber, is of no avail when dry rot attacks and travels through lime mortar. This firm offers a full advisory and treatment service, at a cost of 12s 9d per square yard plus the cost of solution. Expensive? The possibility—but not nearly as costly as the disease.

In this connection a suggestion has been made that churches and other bodies responsible for the maintenance of old buildings should start sinking funds for the cure of dry rot over every ten years whether the disease is present or not. This is sound and economical advice.

Solutions and injectors are shown by Rentokil, Ltd., and it may not be generally known that furniture polishes containing insecticide are available as a preventive or first-aid measure for destruc-

tion of woodworm. Surely these pests to-day must be amongst the fastest workers in the demolition industry.

## TIMBER REVIEW

**A**FTER keeping out of the North European market for softwood for the past five months, except to buy small parcels of specialities and favourite brands, the British importers of softwood timber are now fixing contracts in South Sweden. Many are still not convinced the market prices have dropped sufficiently, but several firms have arranged business at £65, and even £63 a standard, f.o.b., from South Swedish shippers. This represents a saving of up to £20 a standard on the peak prices of last year.

At the same time the freight rate from Sweden and Finland has fallen heavily from the high level of £18 and over at the height of the importing season last year, being now down to £7 a standard for London.

From this it will be seen that the timber being bought now, which will be in the yards in July or June, will cost the trade about £25 or more a standard less than similar softwood now being sold, and this takes into account the increased charges, such as the new bank rate, which the trade has to face.

The advice given in this column to the softwood users to delay buying has proved of financial value. Although licences are being issued quite freely to the softwood users, from reports given by timber merchants it is apparent that few are buying, and their hesitancy cannot be attributed to the fact that the licences are valid for six months. They rightly guess that softwood prices should fall this year, and they expect to see a reduction in retail softwood prices shortly. There is every reason to believe that quite a large number of licences already issued will lapse because the consumers do not wish to buy at present prices, and they have taken this action in the belief that there will be little trouble obtaining renewal licences.

So far the Timber Control softwood now entering the country, mainly from Canada, America and Yugoslavia, is being offered to the timber trade at high prices based on the values at which it was bought last year. Few merchants are buying this wood from National Softwood Brokers, and even fewer consumers are prepared to buy in parcels of at least 200 standards at such rates. Some action can be expected in due course by the Government to clear these accumulating stocks in a falling market.

Stocks of softwood in the country are excellent, and there is likely to be no trouble in meeting any specification wish by the builder or joinery manufacturer.

Although open import licences for hardwoods have been withdrawn, the importers can still buy freely from the Colonies, and stocks of most hardwoods in the country are excellent. Customers are few because of the high prices and the minor slump in the furniture trade. Most importers expect prices from East and West Africa, among others, to fall during the coming weeks. News of the importing scheme for hardwoods from countries other than the Colonies is not expected for a few weeks.

Stocks of both plywood and wallboards are good. In the case of wallboards and hardboards there has been some price-cutting, in spite of the cuts in imports to be permitted this year. This reduction in prices is not general, and the only advice which can be given to the buyer is not to be in too great a hurry to accept the first offer.

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate: (a) type of work, (b) address for application. Where no town is stated in the

## CONTRACT • NEWS •

### OPEN

#### BUILDING

**ABERDARE U.C.** (a) 9 shops, 6 flats and a public convenience, etc., Penywaun. (b) Engineer and Surveyor, Vestry Hall. (c) 2gns. (e) April 18.

**BLOFIELD AND FLEGG R.C.** (a) 16 houses, Rollesby. (b) Messrs. E. Boardman and Son, Queen Street, Norwich. (c) 2gns. (d) April 15.

**BOOTLE B.C.** (a) (Scheme 22 n) 22 dwellings. (Scheme 22 o) 14 dwellings. (Scheme 22 p) 8 dwellings, Sterrix Lane site. (b) Borough Surveyor, Town Hall. (c) 2gns each site. (e) April 22.

**BUNGAY U.C.** (a) 36 flats in 7 blocks adjoining Hillside Road. (b) Messrs. Buckingham and Berry, 10, Thorpe Road, Norwich. (c) 1gn. (e) May 10.

**DOLGELLEY R.C.** (a) 2 houses with site works, Llanymawddwy. (b) Mr. M. T. Pritchard, Victoria Buildings. (c) 2gns. (e) April 18.

**EIRE—LIMERICK C.C.** (a) Library at Dromcollogher. (b) Patrick J. Sheahan, 47, O'Connell Street. (c) 10gns. (e) April 25.

**\*FARNHAM U.C.** (a) 3 pairs of cottages, Badshot Lea. (b) Engineer and Surveyor, Council Offices Annexe, South Street. (c) £2. (e) April 28. See page 34.

**FARNHAM U.C.** (a) 10 houses, Bricksbury Hill. (b) Messrs. A. J. and L. R. Stedman, South Street. (c) £2. (e) April 21.

**GIPPING R.C.** (a) 4 houses, Helmingham. (b) Engineer and Surveyor, Council Offices, Needham Market, Nr. Ipswich. (c) £3. (e) April 30.

**GOSFORTH U.C.** (a) 26 dwellings, South Gosforth Farm Estate. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) April 30.

**HEMSWORTH U.C.** (a) 44 houses and 6 bungalows, Moorshutt and Kingsley Estates. (b) Council's Clerk, Council Offices, White Hall. (c) 2gns. (d) April 19. (e) May 12.

**LLANDILO R.C.** (a) 6 houses at Llanfynydd Village and 4 houses at Farmers Village, Conwil Cain, with ancillary road-works and sewers. (b) Engineer and Surveyor, Council Offices, Crescent Road. (c) 2gns. (e) April 19.

**LONDON—WALTHAMSTOW B.C.** (a) Estate Manager's office and living accommodation, 4 shops and 6 aged persons' bungalows, Priory Court Estate, E.17. (b) Borough Architect, Town Hall, E.17. (c) 2gns. (e) May 3.

**Longbenton U.C.** (a) 70 houses on Section III of the Fordley Estate. (b) Engineer and Surveyor, Council Offices, Forest Hall, Newcastle-on-Tyne. (c) 2gns. (e) April 23.

address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

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**N. IRELAND—CLOGHER R.C.** (a) Repairs to 10 cottages. (b) Council's Clerk, Council Offices, Clogher, Co. Tyrone. (c) April 18.

**N. IRELAND—DOWN COUNTY HEALTH COMMITTEE.** (a) (1) Dental clinic at Park Drive, Bangor, and (2) alterations and redecorations, etc., at 16, High Street, Donaghadee. (b) County Planning Officer, Courthouse, Downpatrick. (c) (1) 5 gns. (2) 2 gns. (c) April 26.

**ORMSKIRK U.C.** (a) 24 houses, Richmond Avenue Estate, Burscough. (b) Council's Surveyor, Council Offices, Burscough Street. (c) 2 gns. (c) April 21.

**SCOTLAND—EDINBURGH C.C.** (a) 18 houses, Muirhouse housing area (separate trades). (b) City Architect, City Chambers. (c) April 18.

**TAVISTOCK R.C.** (a) 24 houses, Lamerton, with site works, etc. (b) Messrs. Rossington and Fodgen, National Provincial Bank Chambers. (c) 3 gns, payable to Council. (c) April 21.

**TAVISTOCK R.C.** (a) 4 houses, Princetown, with site works, etc. (b) Messrs. Rossington and Fodgen, National Provincial Bank Chambers. (c) 3 gns, payable to Council. (c) April 21.

**WEST RIDING C.C.** (a) Repairs and alterations to Pool-in-Wharfedale School. (b) Divisional Education Officer, Otley. (c) April 21.

## PLACED

Notes on contracts placed state locality and authority in bold type with (1) type of work, (2) site, (3) name of contractor and address, (4) amount of tender or estimate. + denotes that work may not start pending final acceptance, or obtaining of licence, or modification of tenders, etc.

## BUILDING

**EASTBOURNE B.C.** (1) 78 houses. (2) Lamingey Village. (3) Building and Public Works Construction Co., Ltd., Swindon. (4) £90,274.

**SHEFFIELD CORPORATION.** (1) 376 houses. (2) Hackenthorpe Estate. (3) Direct Labour Department. (4) £556,536. (1) 40 aged persons' flats. (3) Direct Labour Department. (4) £42,173.

**NORWICH E.C.** (1) Secondary school. (2) Costessey. (3) H. G. Lomax, Lower Hellesdon, Norfolk. (4) £95,146.

**BRITISH RAILWAYS (SCOTTISH REGION).** (1) Repairs to inner berth wall and Fish Wharf. (2) Mollang. (3) H. M. Murray and Co., Ltd., 121, West Regent Street, Glasgow, C.2. (4) £80,000.

**LEICESTER CITY COUNCIL.** (1) 200 "Eastform" houses. (2) Eyres' Mensell Estate. (3) John Lang and Son, Ltd., London, N.W.7. (4) £265,802.

**GUILDFORD CORPORATION.** (1) 82 houses. (2) Bushey Hill. (3) W. H. Gaze and Sons, Ltd., Rochester Vale, Kingston By-Pass. (1) 34 houses. (3) Higlett and Hammond, Ltd., Dapdune House, Guildford.

**STONE (STAFFS) U.D.C.** (1) 72 houses. (2) Lichfield Road Estate. (3) M. A. Boswell, Ltd., School Street, Wolverhampton. (4) £107,569.



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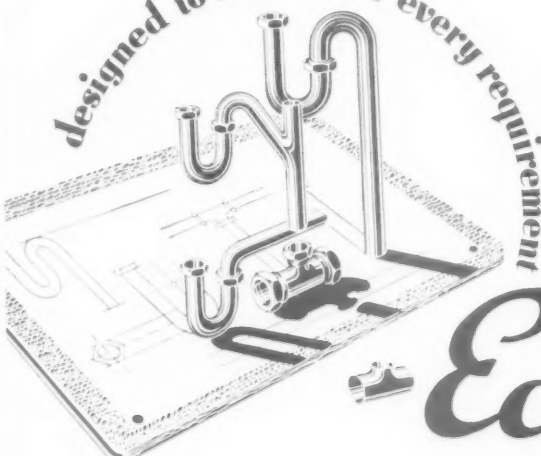
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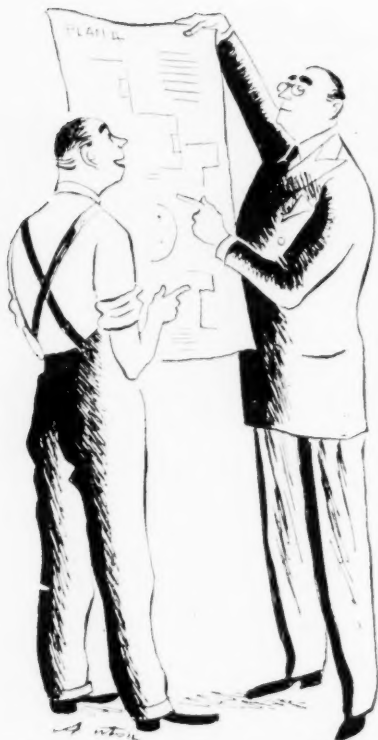
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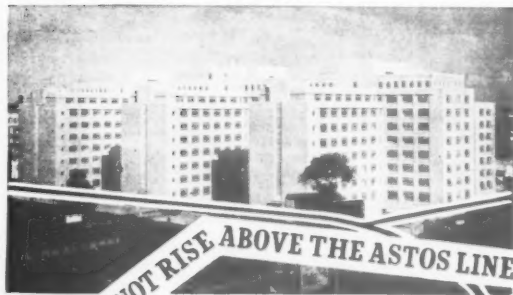
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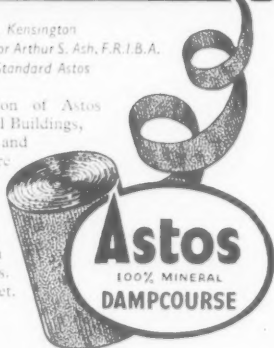
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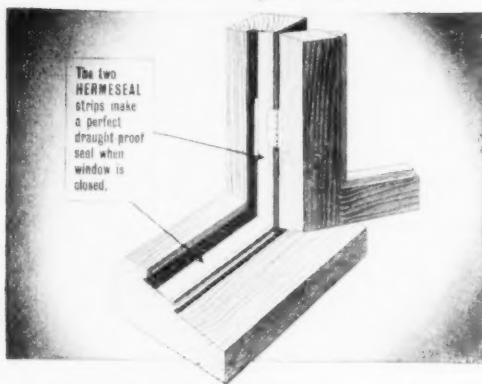
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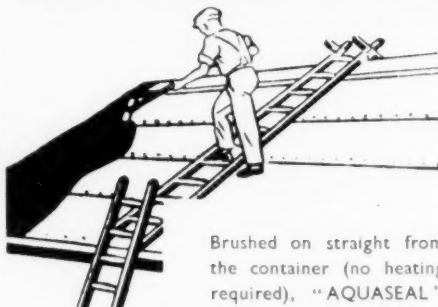
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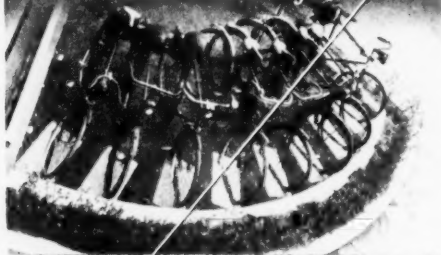
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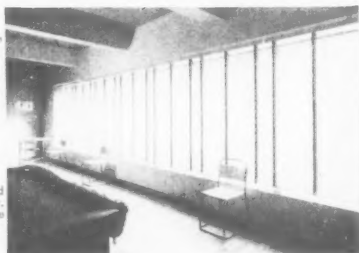
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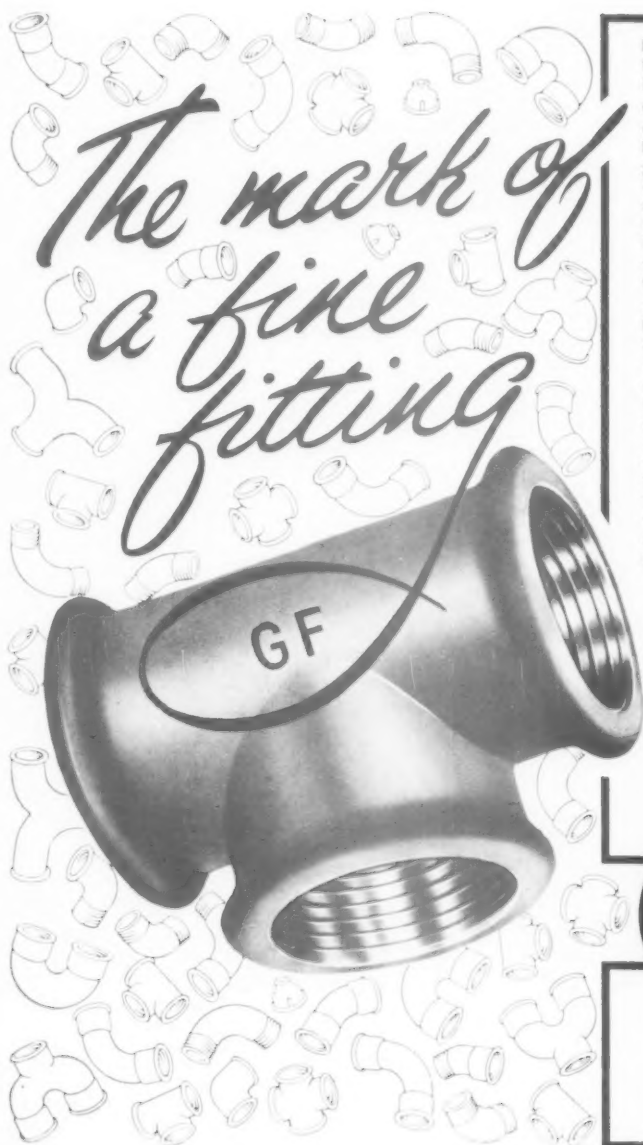
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## INDEX TO ADVERTISERS

Official Notices, Tenders, Auction, Legal and Miscellaneous Appointments on page 35

Acrow (Engineers), Ltd.	29	Docker Brothers	17	Heal's Contracts, Ltd.	30	Sieggart Floor Co., Ltd.	16
Albright & Wilson, Ltd.	4	Dunlop & Ranken, Ltd.		Hope, Henry, & Sons, Ltd.	21	Solignum, Ltd.	33
Anderson, D., & Son, Ltd.	27	Inside Front Cover		Jenson & Nicholson, Ltd.	11	Stainless Steel Sink Co., Ltd.	27
Armstrong Cork Co.	24	Durasteel, Ltd.	25	Kay & Co. (Engineers), Ltd.	31	The Steel Bracketing & Lathing, Ltd.	8
Avery's (Est. 1834), Ltd.	32	Econa Modern Products, Ltd.	27	Kinnear Shutters	1	Stelcom (Industrial Floors), Ltd.	32
Bath & Portland Stone Firms, Ltd., The	34	Ellis School	25, 27	Lang, John, & Son, Ltd.		Stephenson Developments	
Berry Wiggins & Co., Ltd.	32	Engert & Rolfe, Ltd.	25, 27	Land Gear Co., Ltd.	25	Hudd, Ltd.	30
Betterways, Ltd.	25	Evans Lifts, Ltd.	25	Lane & Garvan, Ltd.	30	Stevens, A. & P., Ltd.	26
Blox, C. W.	27	Ferguson, C. J. & Sons, Ltd.	25	Le Bas Tube Co., Ltd.		Stratit Boards, Ltd.	13
Briggs, Wm., & Sons, Ltd.	18	Fleming Bros. (Structural Engineers), Ltd.	2	Inside Back Cover		Sun Insurance Office, Ltd.	32
Bristol Aeroplane Company (Housing), Ltd., The	15	Floor Renovations, Ltd.	26	Liutex Flooring Co., Ltd.	25	Sundela Board Co., Ltd.	8
British Hermesal, Ltd.	30	Gardner, J. & Co., Ltd.	27	Maple & Co., Ltd.	31	Thorn, John, Ltd.	26
British Iron & Steel Federation	29	Gas Council	6	Margolis, M.	25	Thorp, John	25
British Plumber, Ltd.	5	Gaskell & Chambers, Ltd.	20	Marley Tile Co., Ltd.	9	United Paint Co., Ltd.	36
Bryce White & Co., Ltd.	36	General Electric Co., Ltd., The	24	Mudland Woodworking Co., Ltd., The	19	Ward, Thos. W., Ltd.	25
Building Exhibition	12	Gibson, A. L. & Co., Ltd.	1	Ringmer Building Works, Ltd.	25	Wardle Engineering Co., Ltd.	33
Catterata & Co., Ltd.	12	Glow Worm Boilers, Ltd.	22	Ronuk, Ltd.	28	Warry Patent Building Equipment Co., Ltd.	25
Cellon, Ltd.	25	Guthrie & Co., Ltd.	24	Ruberoid Co., Ltd.	28	West, A. & Parts, Ltd.	28
Cement Marketing Co., Ltd.	7	Harvey, G. A. & Co. (London), Ltd.	10	Shaw Manufacturing Company	34	Williams, John, & Sons (Cardiff), Ltd.	14
Cement (Asphaltes), Ltd.	26						
Cullum, H. W., & Co., Ltd.	3						

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